THE SIMPLE LIFE
Cisco tries to make it easier for users to manage its Catalyst 6500 switches. PAGE 7

STAYING ALIVE
Share President Robert Rosen says the 50-year-old mainframe user group still has some life left in it. PAGE 14

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AUGUST 29, 2005 ■ VOL. 39 ■ NO. 35 ■ $5/COPY

LOCKING DOWN IM

ISABELLE ARSENAULT

Instant messaging is in use at **more than 80% of large corporations**, whether the IT department likes it or not. Here's a rundown of strategies for managing the security risks. **Page 31**

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VPNs Gain With Users; Frame Relay Declines

IP-based virtual networks tapped to improve security, support new apps

BY MATT HAMBLEN

Corporate purchases of IP virtual private network services continue to surge forward, a trend that analysts said is being accompanied by a shift away from the use of frame-relay technology to carry network traffic.

IT executives who are rolling out IP VPN connections said last week that the networks provide better security than dial-up systems and many other current approaches. They added that VPNs also can help keep networking costs in check, allowing them to vastly increase bandwidth to handle new applications.

MEADE says cost drove AMF to VPN.

For example, The Stride Rite Corp., a footwear retailer in Lexington, Mass., today will announce plans to deploy an IP VPN connecting 264 stores nationwide. The new network will replace dial-up services with a constant VPN connection at each store and upgrade available bandwidth from 56K to 384Kbit/sec. or more, said Stride Rite CIO Yusef Akyuz.

That will help the retailer accommodate a new point-of-sale system and added

VPNs, page 16

Microsoft Delays Team Tool As Users Look to Collaborate

IT execs face need to link dispersed developers

BY HEATHER HAVENSTEIN

Microsoft Corp. last week pushed back the ship date of a key component of its Visual Studio 2005 Team System. The delay in shipping Team Foundation Server postpones Microsoft's entry into a burgeoning market for collaborative software that can link developers in far-flung locations.

Analysts said that as IT operations use more remote developers, the need for change and configuration management tools, version control software and even weblogging tools is growing.

Team Foundation Server, a server-based product that supports integrated version control, reporting, work item tracking, process guidance and automated build capabilities, will ship in the first quarter of 2006 instead of on Nov. 7, Microsoft said. The remaining components of Visual Studio 2005 — including the other pieces of Team System — will still ship on that date, according to Microsoft.

Meanwhile, the company will now add on Nov. 7 a third beta release of Team Founda-

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MORE INSIDE

Microsoft changes what was supposed to be a free service pack update to Virtual Server 2005 into an upgrade that some users may have to pay for. Page 16

Basel IT Cost Higher Than Projected

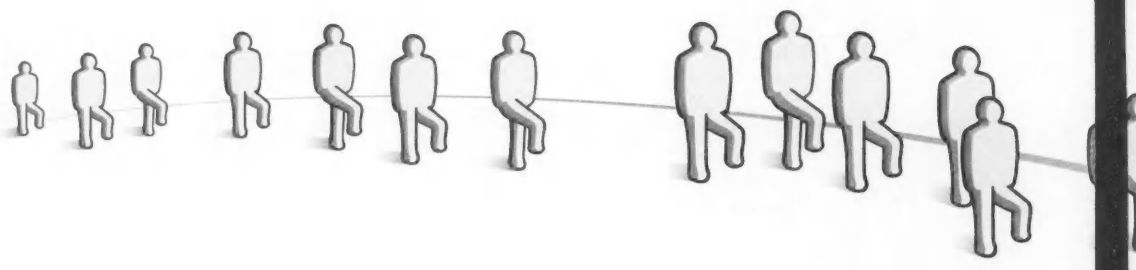
BY LUCAS MEARIAN

For the largest U.S. banks, an international regulation requiring tighter operational risk controls is proving to be far more costly than expected for IT, according to users and analysts interviewed last week.

The new Basel Capital Accord, or Basel II framework, will require that about 20 of the nation's largest banks use IT systems to measure credit and operational risk in order to ensure that they have enough capital on hand to cover their risks.

An Accenture Ltd. survey of large U.S. banks released last month found that dozens are spending significant sums to comply with Basel II. Most of the respondents said they also fear that the strict Basel II conditions will only slightly

Basel, page 48



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08.29.05

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No Strings Attached

In the Management section: Rent-A-Center's flexible, wireless hiring kiosks have saved time and money, improved hiring and inspired further automation, says CTO and Premier 100 IT Leader Tony Fuller. **Page 36**

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7 **Ontario will take back** control from Accenture of a welfare case management system that critics say still has problems.

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12 **The Treasury Department** reopens bids for a $1 billion telecommunications contract after deciding it couldn't be handled through the GSA.

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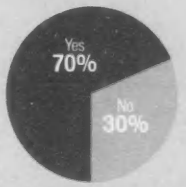
QuickPoll Results

Should the federal government be recruiting hackers to work on information security programs?



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Viruses: New Weapon of Choice For Disgruntled Workers

SECURITY: Risk Control Strategies' Paul Viollis and Doug Kane say companies need to know how to recognize unhappy employees who might deploy viruses on the network in acts of sabotage. **QuickLink 56282**

Is the Real ID Act the Real Deal For Better Security?

SECURITY: Gary Klinefelter, vice president of technology at Fargo Electronics, examines some of the issues raised over the Read ID Act, which authorizes the first national ID card. **QuickLink 55896**

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The Online Store **QuickLink a2420**

AT DEADLINE

India Plans Registry Of Outsourcing Staff

Next month, India's National Association of Software and Service Companies will begin work on an online national registry of workers at business process outsourcing firms. The proposed registry, which is intended for use in employee background checks, could help reduce the risk of criminal activity, according to some industry insiders.

Novell Profits Slump On Revenue Decline

Novell Inc. reported a 91% drop in third-quarter profit on a slight decline in revenue as the company continues to shift its focus from NetWare to Linux.

NOVELL BY THE NUMBERS

	REVENUE	
Q3 '05	$290M	$2.1M
Q3 '04	$305M	$23.4M

Several Charged In Win 2k Hack

Several people in Turkey and Morocco have been arrested for their suspected involvement in the recent spate of computer worms targeting Microsoft Corp.'s Windows 2000 operating system. Microsoft worked with Turkish and Moroccan authorities and the FBI in the effort to find the alleged culprits. The worms, known as Zotob, Rbot and Mytob, enabled hackers to take control of infected PCs.

Infor Global Buys PLM Vendor

ERP software maker Infor Global Solutions has acquired Formation Systems Inc., a maker of product life-cycle management (PLM) tools, for an undisclosed sum. Three-year-old Infor has steadily scooped up other software companies to create its ERP software line. Infor will sell Formation's Optiva software as a stand-alone product until the PLM tool is integrated into its offerings.

Microsoft Puts Price on Virtual Server Upgrade

Says it warrants product release; users without Software Assurance have to pay

BY CAROL SLIWA

MICROSOFT CORP. last week disclosed plans to change the initial service pack of bug fixes and enhancements that had been planned for its Virtual Server 2005 software into an "R2" product upgrade that some users may have to buy.

There have been no major feature changes since Microsoft announced a beta version of what was supposed to be Service Pack 1 for Virtual Server 2005 in April, said a company spokesman. But Microsoft officials decided that the update's performance and availability improvements, 64-bit compatibility and other planned enhancements "passed the bar" necessary for a full product release, said Zane Adam, a director of marketing for Windows Server.

Users who bought a Software Assurance maintenance package for the virtualization software as part of a volume licensing deal with Microsoft will be able to get the R2 upgrade for no extra cost, Adam noted. But those who didn't purchase the maintenance plan will have to pay for R2.

"It would probably be a significant issue for us if we had deployed [Virtual Server] in more areas and we didn't have Software Assurance," said Michael Brown, a support services manager at the Denver Health and Hospitals Authority Inc. "This is certainly different from Microsoft's traditional model."

Microsoft users are accustomed to getting a service pack update following the release of an enterprise product, Brown added. He said Denver Health will test the R2 upgrade when the final version is released later this year.

Like Denver Health, four other users contacted by *Computerworld* said they purchased Software Assurance packages for Virtual Server, which allows multiple copies of an operating system to be run on a single computer.

"Usually, if we're going to use something long term, we buy it with Software Assurance," said Stan Johnson, a desktop and LAN services manager for the Multnomah County government in Portland, Ore. "So the fact that they're doing a new product release isn't a significant concern to me."

Beyond a Service Pack

Demond Hatter, a technical analyst at Exelon Corp. in Chicago, said he typically considers a service pack to be oriented toward bug fixes. "If this is more of a functionality enhancement, I can see it not being a service pack," he said.

Virtual Server users who lack Software Assurance's upgrade protection won't miss out on critical bug or security fixes, according to Adam. However, they won't get the rollup of fixes that comes with a typical security pack unless they opt to buy R2.

Microsoft "sweated" over the decision to make R2 a product release, Adam said. But, he added, the company was in a somewhat unique situation with Virtual Server, since it has been on the market only since last October.

Adam said Microsoft studied the Virtual Server customer base and found that the majority of users with multiple copies of the software have Software Assurance as part of volume licensing contracts.

Microsoft provided an update on its virtualization plans at last week's Intel Developer Forum in San Francisco. The software vendor's long-term virtualization road map calls for a thin hypervisor layer of code supporting virtualization capabilities to be built into the next major release of Windows Server, code-named Longhorn. But Microsoft has said that the hypervisor technology won't make it into the initial Longhorn server release due sometime in 2007.

In the interim, Microsoft intends to develop a second full version of Virtual Server that will follow the R2 release. Last week, it outlined plans to ship a beta copy of that version in the first half of 2006 and the finished software in the second half of the year.

The promised new features include support for Intel Corp.'s performance-boosting virtualization technology, VT, as well as Advanced Micro Devices Inc.'s rival Pacifica approach. **56460**

Virtual Server Road Map

- The planned SP1 update for Virtual Server 2005 has been changed to an R2 product upgrade, scheduled for release in the fourth quarter.
- A new version is due next year with support for the rival hardware virtualization technologies being developed by Intel and AMD.
- A hypervisor layer of virtualization code will be built into the Longhorn server version of Windows, but Microsoft says it won't be in the first release.

New Intel Chips to Run Slow, Save Power

SAN FRANCISCO

THE NEW architecture that will grace Intel's processors starting in the second half of 2006 borrows many of the design philosophies that have made the company's Pentium M processors a success, Intel executives said last week.

Intel President and CEO Paul Otellini, in his keynote address at the Intel Developer Forum here, confirmed the company's plans to release new dual-core chips for desktops, notebooks and servers based on a common power-saving architecture.

The architecture carries forward some of the technologies found within the Pentium 4's Netburst architecture, such as 64-bit technology and virtualization features, said Stephen Smith, a vice president in Intel's Digital Enterprise Group and general manager of its desktop platforms unit.

However, the design laid out by Intel has much more in common with the Pentium M processor family and its focus on saving power, analysts said.

It will appear in the second half of 2006 with the introduction of the Merom processor for notebooks, the Conroe CPU for desktops and the Woodcrest device for servers.

Intel's new architecture dials down the power and the clock speed by using only 14 stages to process data, meaning the chips will do more work per stage and can therefore run at slower clock speeds, Smith said.

Merom and the other new chips will also be able to process four instructions per clock cycle, Smith said.

Nathan Brookwood, an analyst at Insight 64 in Saratoga, Calif., called that feature a significant improvement that will allow the processors to do even more work per cycle than the Pentium M.

Another notable improvement in the new design is the ability of its memory caches to share data. That feature, which was first designed into the Yonah dual-core mobile processor due out in the first quarter of next year, will be extended to all chips starting next year.

– Tom Krazit, IDG News Service

Cisco Expects IOS Upgrade to Ease Management of Catalyst Switches

New modularity features aim to speed software upgrades and switch restarts

BY MATT HAMBLEN

Cisco Systems Inc. today plans to announce an upgrade of the Internetworking Operating System software for its flagship Catalyst 6500 Series switches, supporting increased modularity that's designed to improve operational efficiency for IT managers.

The new features, which are scheduled to become available on some Catalyst 6500 models late this year, should enable faster restarts of the switches and reduce the time it takes users to install software upgrades, said John Yen, senior manager of switching product marketing at Cisco.

The updated switch offering is based on technology built into the CRS-1 carrier-class routing system that Cisco introduced in May 2004. Overall, the technology has been in the works for the past three years. Asked why the technology wasn't available sooner, Yen said, "It takes this long for something like this."

ROGERS: The new IOS will let American Century reduce upgrade times.

American Century Investments in Kansas City, Mo., has tested the enhanced IOS on 60 Catalyst 6500s during the three-year development cycle, said Dave Rogers, senior IT network manager at the financial services firm. He estimated that the increased modularity will reduce the time American Century spends upgrading the software on all 60 switches from six weekends to about six hours.

"This capability actually allows us to do software upgrades immediately without production downtime or waiting until a scheduled maintenance window," Rogers said in an e-mail interview.

American Century plans to install the upgrade next year, Rogers said. He noted that the software will also allow automatic recovery of a single networking process within a switch without interrupting the flow of data for other processes.

For example, if a routing table gets corrupted and needs to be cleaned up and restarted, the new capabilities in IOS will enable that work to be done without affecting functions such as the management of port configuration data, said Zeus Kerravala, an analyst at Yankee Group Research Inc. in Boston.

Previously, IT shops have had to resort to shutting down entire switches to perform maintenance tasks, often on weekends, Kerravala said.

He added that Juniper Networks Inc. offers similar functionality on routers but not switches, while Extreme Networks Inc. supports some of the capabilities on its switches. But the Catalyst 6500 installed base is enormous, and users have been asking for the functionality for a long time, Kerravala and others said.

"The IOS update is a pretty big one," said Mark Fabbi, an analyst at Gartner Inc. "It will certainly make the life of network operators easier. I've always considered one of Cisco's Achilles' heels to be operations, and this clearly helps make things better."

Yen said the update will be added to Cisco's IOS 12.2SX release in the fourth quarter for users of the Catalyst 6500 Supervisor Engine 720, which is aimed at data center applications. The new features are due to become available in the first quarter of 2006 for customers using the lower-end Supervisor Engine 32.

The update also includes new software that can help IT managers automate routine tasks, Yen said. **56443**

Ontario Gov't to Take Control Of Controversial IT System

BY MARC L. SONGINI

The government of Ontario next month will take control of a controversial 3-year-old welfare payment system that critics say is still underperforming and failing to deliver a return on investment.

The Social Delivery Model Technology (SDMT) system was custom-written by Accenture Ltd. to modernize and improve business processes at the Ontario Ministry of Community and Social Services (CSS). Accenture has run the system for the ministry since its installation in 2002.

The five-year development project started in 1997. Accenture was to be paid no more than $151 million but eventually billed $206 million. The overall price tag ballooned to an estimated $335 million.

Since the SDMT system went live in 2002, end users have complained about downtime and difficulties with usability and stability, which has provoked political controversy [QuickLink 48520].

One chapter of the saga will end on Sept. 30, when Accenture's contract to run the system expires. In a statement, the CSS claimed that knowledge transfer with Accenture has been completed and that the ministry is "fully prepared" to assume maintenance and support responsibilities.

Lingering Dissatisfaction

But criticism of the system continues from some corners.

"No one can say that the public got value for its money," said Ontario legislator Shelley Martel, a member of the provincial parliament from the Nickel Belt region. "The computer system doesn't work the way it was supposed to after all this time. People have to go in and manually make changes when they should be done directly online. I don't know what the government can do to fix the computer problems at this point."

Some regional welfare administrators last week agreed that there are outstanding issues with the system — primarily the fact that it's still difficult to use.

For example, Janet Menard, a director of Ontario Works in the Region of Peel, said the system is rules-driven and complex. Adjustments related to policy changes can be made only during regular upgrades, she said, which can cause problems for her operation.

Without offering details, a CSS spokesman said via e-mail that many improvements have been made to the underlying technology. For example, the system has been tweaked so that the ministry can reduce the number of consultants needed to run it.

In addition, the spokesman said that response times have improved, system availability has been running at 99% over the past year, and rigorous testing is regularly undertaken prior to enhancement rollouts.

For its part, Accenture stands by the results of the project. "Accenture's work for Ontario has helped create a welfare delivery system that operates more efficiently than at any time in its history," stated Accenture partner Alden Cuddihey, in an e-mail.

He claimed that the Ontario government has paid the additional $55 million billed by Accenture out of savings, not with tax dollars.

Despite the system's troubles, Menard also believes that it is an improvement over its predecessor. The SDMT has "taken us well beyond other welfare jurisdictions in terms of technology," she said. "It's a good foundation." **56462**

Study Finds Many IT Failures in Ontario

SOME 40% of all IT projects undertaken by the provincial government of Ontario fail to meet goals in some way, according to a report issued last month by a task force of government and academic officials.

The province's IT projects are missing targets in a variety of ways, including cost overruns, the inability to achieve expected benefits, and the loss of support and momentum, the study found. In many cases, the "results [are] well short of hoped-for outcomes," the report said.

The report has already prompted the government to adopt a portfolio management approach on all major IT projects, said Government Services Minister Gerry Phillips in a statement. In addition, plans are under way to create a scorecard-based system to assess risks and ensure that projects are in line with priorities.

The task force was commissioned in September 2004 by the province's Ministry of Government Services.

The report, titled "On the Management of Large-Scale Information & Information Technology Projects," was commissioned in part because of the perceived shortcomings of the Social Delivery Model Technology welfare system created by Accenture, according to an agency spokesman.

Among the recommendations of the task force was that the Ontario government "significantly increase the strength of its governance of major operational transformations."

– Marc L. Songini

BRIEFS

BEA to Buy Portal Vendor Plumtree

BEA Systems Inc. has agreed to buy portal software maker Plumtree Software Inc. for around $200 million in cash. Analysts had expected a larger company to buy the struggling Plumtree, which will add a new line of collaboration software to BEA's portfolio. The deal is expected to close in the next few months. BEA said the Plumtree portal will be aimed at a different audience than its own WebLogic Portal software.

Microsoft, Artemis Settle Lawsuit

Microsoft Corp. has reached a confidential settlement in a trademark infringement case brought against it by biometrics company Artemis Solutions Group Inc. Under the settlement, Artemis retains rights to its BioCert trademark and dismisses its suit against Microsoft. In May, Microsoft began licensing a patented technology called BioCert to third parties.

WiMax Testing Due to Begin Soon

The WiMax Forum is expected to finish validating a system for certification testing this week. Some vendors already have products at the Cetecom SA lab in Malaga, Spain, the testing site. The forum is currently validating test scripts and equipment. The WiMax Forum expects formal testing to begin in October, with the first products certified by the end of the year.

E-commerce Sales Up 26% in Q2

Online retail sales in the second quarter reached $21.1 billion, up 26% from $16.8 billion a year earlier, according to the U.S. Census Bureau. Total retail sales for the quarter were $940.8 billion, up 8.4%. Online travel services, financial brokers and dealers, and ticket agencies aren't included in the survey.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

MATTHEW FAULKNER

Death to :) and :-(and ;-> and the Like! Let . . .

. . . natural communications recommence. A world without emoticons would be a far better place. It could happen if more companies embrace unified messaging technologies, suggests Andrew Feit, senior vice president of marketing at Adomo Inc. in Cupertino, Calif. "Business messaging swung over to text because there was a record of it with e-mail," Feit argues. Traditional voice mail systems hobble users by not letting them easily view and prioritize messages, he says. But with unified messaging, v-mail becomes aural e-mail, letting you see who has contacted you and then determine which message to listen to first. You can also store voice mail or pass it along to anyone with an e-mail account. Feit says those capabilities will "swing the pendulum back toward voice communication because it's more efficient than text." Plus, he adds, "it's easier to express a feeling to the recipient." So, you'll no longer have to ponder which emoticon best represents the sarcasm you want to express about, say, vendor product-delivery promises. No need to feel cynical about the delivery of Adomo's Voice Messaging for Exchange appliance. It's being announced today but has been shipping for two weeks. Feit says the device connects your Microsoft Exchange servers to your private branch exchange. V-mails are routed to your Outlook folder, and if callers are listed in your address book, their information is displayed. According to Feit, capabilities due by year's end include a speech-based autoattendant that can find names in a company directory through voice or keypad prompts. Another upcoming feature will let outside callers schedule meetings with Adomo users by checking their Outlook calendars via voice. Pricing for the appliance starts at $12,000.

Adomo Voice Messaging for Exchange appliance

Proprietary mobile e-mail protocols are . . .

. . . likely to fall victim to the open-source movement. So claims Fabrizio Capobianco, CEO of Funambol Inc. in Redwood City, Calif. That spells trouble for the existing protocols from Research In Motion Ltd. and Microsoft Corp., he predicts. "Mobile e-mail will clearly be a commodity," Capobianco says. "And in such a market, open-source wins." Funambol's Sync4j software is an open-source application server for mobile devices that includes e-mail, calendaring and contact management apps plus data synchronization tools for BlackBerry, Palm, Symbian and Windows Mobile devices, as well as Java-based phones and even iPods. (Although iPods don't yet have mobile phone capabilities, they do have contact lists that can be updated with Sync4j.) Capobianco says a 3.0 release due late this year will deliver e-mail and other apps to any cell phone that supports the Sync ML standard, which is being driven by the Open Mobile Alliance, a consortium of more than 200 companies. Sync4j 3.0 will also add support for apps based on Microsoft's .Net Compact Framework technology.

CAPOBIANCO says mobile e-mail will be a commodity.

Ex-cop now deters cybercrime with . . .

. . . tools designed to protect sensitive corporate data. Jim Pante once collared fraud and vice criminals in New Jersey, but he has shifted his talents to nabbing thieves trying to sneak data out of your enterprise. Pante is the CEO of San Mateo, Calif.-based Tablus Inc., which sells Content Alarm, an appliance with software that crawls your network looking for data types to protect [QuickLink 54822]. Content Alarm then enforces your data-protection policies. This fall, Tablus will add its controls to mobile devices that connect to corporate networks. Pante says that you need to control content not just for intellectual property and identity-theft reasons, but also because it's increasingly a crime not to do so. He also notes that global security teams need to account for all the unique laws in different nations. Content Alarm includes policies for complying with U.S. and European Union regulations. Pricing starts at $25,000.

1 in 23
Number of U.S. citizens who are victims of identity theft, says Utah's attorney general.

Detect whether remote computers comply . . .

. . . with corporate security policies, even if they aren't connected to your network. That trick is one of the new features being added this week by LANDesk Software Inc. in South Jordan, Utah, as part of a Security Suite 8.6 upgrade. According to Kevin Auger, LANDesk's product line manager, a Management Gateway module adds a bit of client code to laptops that senses when the machines are on the Internet and then connects them to your Security Suite server. The software checks to see whether your devices are up to date with antivirus software, patches or anything else you set in your security policies. Pricing for Security Suite 8.6 starts at $59. **56421**

8
Number of days after beta release of Microsoft Vista before first virus appeared.

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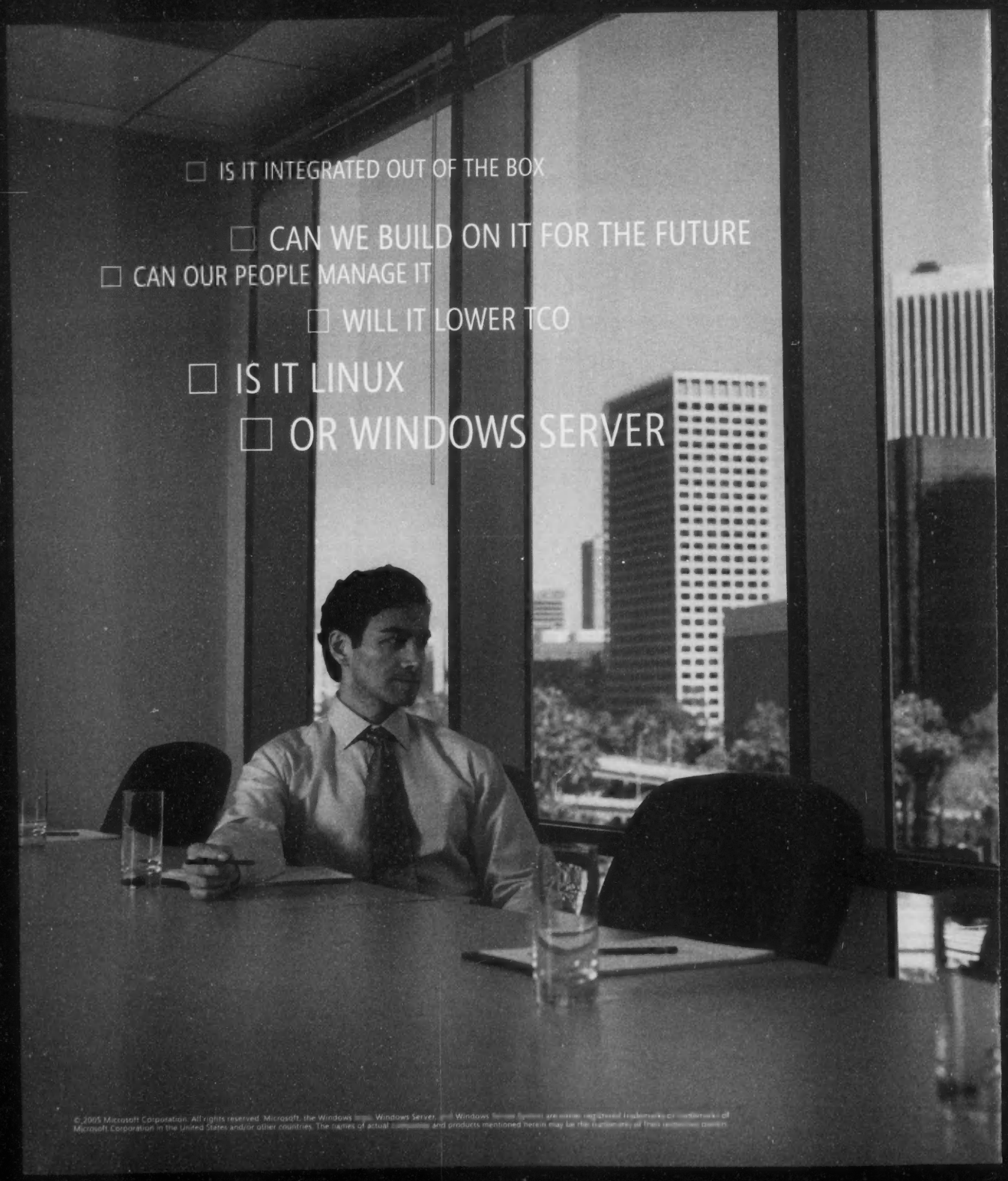

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Microsoft
Windows
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BRIEFS

Sun Releases DRM As Open-Source

Sun Microsystems Inc. will release its digital rights management project under an open-source license, in hopes of driving a unified standard to protect digital media such as music and movies. The Dream Project will be released in the coming weeks under the open-source Common Development and Distribution License. No other companies have yet joined in the effort.

Fiorina to Write Career Memoir

Carly Fiorina has signed a deal to pen a memoir about her career, which went on hiatus last February following her ouster from Hewlett-Packard Co. after a turbulent five-year run as CEO. Due out in late 2006 from Penguin Group (USA) Inc.'s Portfolio unit, the book will include career highlights and her views on topics such as leadership, technology and women in business.

Novell to Buy Out Indian Partner

Novell Inc. is acquiring its partner's stake in Onward Novell Software (India) Pvt., a Mumbai, India-based sales and distribution joint venture. Novell has operated in India since 1992 as Onward Novell Software with Indian partner Onward Network Technologies Ltd. Novell's development center in Bangalore, India, is already a subsidiary.

U.K. Firm First to Use Sun Grid Utility

A U.K. financial services software vendor has released an application that uses the pay-per-use Sun Grid compute utility, making it the first Sun Microsystems partner to use the technology. CDO2 Ltd. has finished a trial deployment on Sun Grid and is ready to sell the hosted application using the pay-per-use feature.

New York Signs Pact to Boost Transit Security

$212 million project includes rollout of software, cameras and sensors citywide

BY JAIKUMAR VIJAYAN

NEW YORK'S Metropolitan Transportation Authority (MTA) last week said it has chosen Lockheed Martin Corp. to be the prime contractor on a $212 million project to bolster security across all of its facilities.

Under a three-year contract, Lockheed Martin will develop and deploy an infrastructure-protection system that will use thousands of cameras, as well as intelligent video and sensor technologies, to monitor New York's subway system, commuter-rail platforms, and highway bridges and tunnels.

The integrated command, communications and control capabilities that the project will deliver should "harden" the transit system against future terror attacks, Bill Morange, the MTA's security director, said in a statement.

WWW.PHOTO.COM

LOCKHEED MARTIN is the prime security contractor for the MTA.

The authority's effort to bolster security comes just weeks after July's terrorist bombings in London. The attacks there raised concerns about the vulnerability of commuter-rail and mass-transit systems in the U.S. and the IT challenges involved in protecting them [QuickLink 55438].

Charles Patterson, a member of the transportation security council at ASIS International, an Alexandria, Va.-based trade association for security professionals, called the New York plan one of the most advanced transit-security initiatives undertaken in the U.S.

"I think it's a very good and a very significant step in the right direction," he said.

"As far as I know, it's the only large-scale systems integration initiative [of its sort] in the country," Greg Hull, director of operational safety and security at the American Public Transportation Association in Washington, said via e-mail.

Rochester, N.Y.-based Lenel Systems International Inc. will provide the software supporting core applications such as the access control, alarm monitoring and digital video surveillance systems. The MTA will also use technologies from vendors such as Arinc Inc., Skanska USA Civil Inc. and Intergraph Corp.

The new system will give the MTA "a common operational picture" across all of its facilities, said Mark Bonatucci, program manager for the initiative at Bethesda, Md.-based Lockheed Martin.

> **"As far as I know, it's the only large-scale systems integration initiative [of its sort] in the country."**
>
> **GREG HULL**, DIRECTOR OF OPERATIONAL SAFETY AND SECURITY, AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

Each command center will be equipped with a bank of video screens for displaying feeds from cameras and sensors and showing satellite and image-based displays of MTA facilities. Alarms and alerts will be automatically forwarded to the centers for analysis, and Bonatucci said the video screens will give workers recommended courses of action for handling situations. **56464**

Treasury Reopens Bidding For $1B Telecom Contract

AT&T deal was canceled in May amid protests

BY LINDA ROSENCRANCE

The U.S. Department of the Treasury is reopening bidding for a $1 billion communications contract that was originally awarded to AT&T Corp. late last year. That deal was canceled in May after competitors protested that the bidding process was unfair.

The agency made the latest move after an unsuccessful effort to find a contractor through the General Services Administration (GSA).

The three-year Treasury Communications Enterprise contract, which includes seven one-year options, seeks a vendor to supply telecommunications services and support for more than 1,000 domestic locations and tens of thousands of users in the U.S. and overseas.

The contract, initially won by AT&T in December, was canceled after protests were reviewed and upheld by the Government Accountability Office [QuickLink 54669]. Objections came from Broadwing Communications LLC, Level 3 Communications Inc., MCI Inc., Northrup Grumman Information Technology and Qwest Government Services Inc. A sixth bidder, Sprint International Communications Corp., didn't contest the contract.

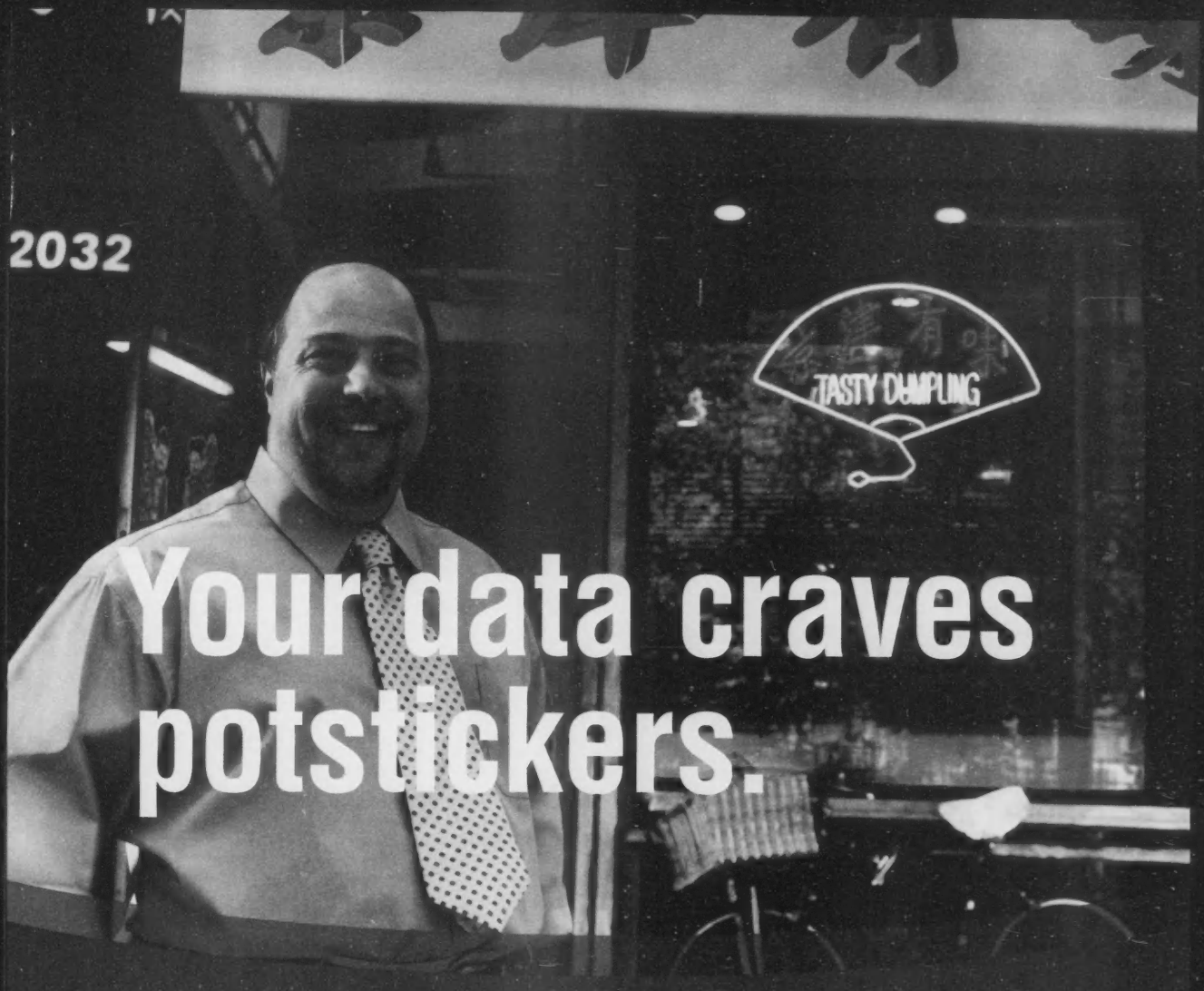
In its decision, the GAO said the Treasury Department had not had discussions with all of the bidders and ordered the department to do so before re-awarding the contract.

After canceling its deal with AT&T, the Treasury Department had said it would use the existing GSA programs and contractors for the work.

However, in an e-mail statement last week, a Treasury Department spokeswoman said the department is moving forward with its own procurement effort because an evaluation found that no existing GSA contract could meet its communications needs.

The Treasury Department also said it will implement the GAO's recommendation to renegotiate with the other bidders and will give the vendors that had previously submitted proposals an opportunity to submit revised bids.

Treasury officials didn't give a timeline for the process. The GAO couldn't be reached for comment. **56457**



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Oracle Ships Overdue 10g Collaboration Suite

But year-late release maintains price advantage

BY STACY COWLEY

ORACLE CORP. has shipped the newest version of its Oracle Collaboration Suite, two years after the software's last major update and more than a year after its intended release date.

Oracle launched its suite in 2002, positioning it as a low-cost alternative in a market dominated by Microsoft Corp.'s Exchange and IBM's Notes/Domino. The new 10g version was originally slated to ship by mid-2004.

Although the Oracle suite can be used at non-Oracle sites, Gartner Inc. analysts said in a report that they expect it will appeal mostly to Oracle customers who don't need complex collaboration or messaging functionality. For such users, the software's low price tag — $60 per named user for a perpetual license — could be very attractive, the report said.

The IBM and Microsoft offerings include higher back-end and per-user costs.

Pemco Aviation Group Inc. installed Oracle's collaboration software two years ago after evaluating rival offerings from IBM, Microsoft and other vendors, said John Griffith, director of IT at the aerospace services and repair company.

Birmingham, Ala.-based Pemco had been using Exchange, but upgrading to the latest version would have been prohibitively expensive. Oracle's software offered more functionality at a lower cost, said Griffith. He has been beta-testing Oracle's 10g release for several months and expects to soon begin moving components of it into production for Pemco's 650 users.

Griffith said Pemco will quickly take advantage of the new Workspaces collaboration portal, which builds on content management functionality in Oracle Files but offers a unified user interface.

Still, as a sign of how deeply entrenched the market's leaders are, Pemco's employees still use Outlook as their front-end e-mail client.

"When we switched, we did very little training," Griffith said. "The users don't know Oracle is on the back end."

Moving on Messaging

Like the rival offerings, Oracle's suite offers personal e-mail and calendar applications, as well as collaborative tools such as group file management and Web conferencing. The 10g version adds long-awaited instant messaging functionality and the Workspaces feature.

Despite offering a price tag that frequently undercuts Microsoft's and IBM's, Oracle has gained little traction in the market, thanks in part to the suite's more limited functionality. Market research firm IDC estimates the 2004 worldwide market for "integrated collaborative environments" at $1.9 billion, with Microsoft and IBM together drawing 90% of that spending. Oracle registered seventh on IDC's list, with 0.3% of the market.

"The greatest challenge Oracle faces is getting credibility in the messaging world," said David Ferris, president of messaging and collaboration research firm Ferris Research Inc. in San Francisco.

Despite the delay, users won't hold it against Oracle, since they're getting the integrated technology they wanted, said Mike Gotta, an analyst at Burton Group, a consultancy in Midvale, Utah.

The new offering should also reassure users that there is senior-level visibility and commitment from Oracle about collaboration, Gotta said. **56439**

Cowley writes for the IDG News Service. Computerworld's Marc L. Songini contributed to this story.

Share President Still Sees A Future for User Group

BY CHINA MARTENS

Share, a Chicago-based user group that's oriented toward IBM mainframe shops, is celebrating its 50th anniversary this year [QuickLink 52972]. The independent user group currently has about 20,000 members, according to President **Robert Rosen**. *Rosen, who is CIO of the National Institute of Arthritis and Musculoskeletal and Skin Diseases at the National Institutes of Health in Bethesda, Md., spoke with the IDG News Service before last week's semiannual Share conference in Boston.*

How has Share changed over the years? My first Share meeting was in 1970. Share was much more related to the scientific environment then. The joke about Share used to be there'd be all technical people talking bits in different corners. If you asked, "What's the best way to organize my help desk?" people would look at you as if you came from Mars. But probably from the mid- to late-'70s [onward], Share was also covering business issues. The real difference back then was that when we talked to IBM, it was very much down at the bit and byte level. Now it's very much, "What's the business reason for this [product or feature]?"

And how has the relationship between Share and IBM been altered? There have been ups and downs in the relationship, adversarial vs. working together. It depended on which part of IBM you were dealing with. We always had pretty good relationships with the developers. At one point IBM said, "Here's what we're planning to do in the next two years," and we had input into that. We still have that, but it's done in a different way, through technical steering committees, where the groups meet the whole weekend before Share with IBM, and the meetings don't attract as much publicity.

One big difference is that IBM has more ways to get information [from users]. Back when I first started [with Share], when IBM came to a meeting, 80% of their customers would be there. Now IBM has customer councils, weblogs, a lot more sources of information. But one of the problems with getting information is that you need to validate it. How good is it? Who is this person, a crank or a CIO? Share offers a measure of quality of input.

What about attendance at Share meetings? The attendance has been up and down. After 9/11, it was down some, but we've seen the trend reverse; it's flattened out, and [now] there's a bit of an increase. Share's still doing well; we've still got money in the bank. We still have a future. **56442**

Martens writes for the IDG News Service.

MAINFRAME MAVENS

IBM and Share want to help young IT workers find mainframe jobs:

QuickLink 56383
www.computerworld.com

Sarbanes-Oxley Seen as Biggest IT Time Waster in Poll

Share members who responded to an online poll this month said they expect complying with the mandates of the Sarbanes-Oxley Act to be the least effective or most wasteful use of their IT resources in coming years, followed by the deployment of unproven technologies.

The results of the poll, which was conducted from Aug. 4 to 15 among people who had preregistered for Share's Boston conference, were released last week as part of the event.

Twenty-eight percent of the 444 respondents cited Sarbanes-Oxley compliance as a time waster, while 23% chose the installation of unproven products. Another 19% opted for purchases of unneeded technologies, and 17% picked continued support of outdated hardware and software.

Share President Robert Rosen said he wasn't surprised that Sarbanes-Oxley is proving to be a major headache for IT managers and staffers. "It's occupying a lot of people's time, and they can't figure out what the return on investment is there," he said.

Heightened information security is the emerging trend most likely to affect business computing over the next five years, according to 31% of those who answered the Share poll. Two other significant trends identified in the poll are the shortage of qualified enterprise-class IT professionals, and outsourcing or offshoring of application development and maintenance.

– China Martens, IDG News Service

GLOBAL DISPATCHES An International IT News Digest

Fujitsu Sues Nanya Over Memory Chip Patent

TOKYO

FUJITSU LTD. last week filed a patent infringement lawsuit against Taiwanese memory chip maker Nanya Technology Corp., seeking to prohibit the future importation and sale of synchronous dynamic RAM devices made by Nanya.

The lawsuit was filed in Tokyo District Court against Nanya's local subsidiary, Nanya Technology Corporation Japan. Tokyo-based Fujitsu is also asking the court to award it undisclosed monetary damages.

The suit involves a patent related to a technology for improving the speed of double data rate SDRAM chips, a Fujitsu spokesman said. He added that Fujitsu took legal action after talks between the two companies failed to produce an agreement on patent licensing.

Nanya declined to comment on the lawsuit.

"We haven't received any information from Fujitsu yet, so we can't comment right now," said a spokeswoman at Nanya's headquarters in Taoyuan, Taiwan.

■ MARTYN WILLIAMS AND DAN NYSTEDT, IDG NEWS SERVICE

GLOBAL FACT

9%

Projected compound annual growth rate in spending on Ethernet switches in the Asia-Pacific region from 2004 through 2009.

Source: Gartner Inc.

Vendor's CEO Gives Up Taiwanese Citizenship

TAIPEI

THE HEAD OF China's largest chip maker has applied to give up his Taiwanese citizenship after a spat with the island's government. The move highlights the troubles that chip industry workers from Taiwan face when doing business in China.

Richard Chang, CEO of Semiconductor Manufacturing International Corp., is a dual citizen of the U.S. and Taiwan, where he worked for years before founding Shanghai-based SMIC. But his involvement in SMIC riled the Taiwanese government, which has strict rules governing how and when its citizens and Taiwan-based companies can invest in China's semiconductor industry.

The government levied a fine of 5 million new Taiwan dollars ($155,000 U.S.) against Chang in March, saying that he failed to apply to authorities before investing in SMIC. Chang was given six months to withdraw his investment or face further penalties. His attorney is fighting the case in Taiwan, said an SMIC spokesman.

Taiwan fears that chip investments in China could lead to job losses and that its technology could be used to bolster Chinese military prowess.

■ DAN NYSTEDT, IDG NEWS SERVICE

Motorola Says No to Manufacturing in India

BANGALORE, INDIA

MOTOROLA INC. plans to increase its staff in India by about 1,000 by the end of next year, according to Chairman and CEO Edward Zander. But the company has ruled out plans to manufacture telecommunications equipment in India, although it might look at doing some "back-end assembly" in the country, Zander told reporters here last week.

Schaumburg, Ill.-based Motorola currently employs 2,900 people in India — 2,500 at its research and development centers, and the rest in sales, marketing and support positions. Some 1,100 Motorola employees are also working on projects with software development outsourcing companies in India, according to Amit Sharma, vice president of Motorola India. **56412**

■ JOHN RIBEIRO, IDG NEWS SERVICE

Compiled by Mike Bucken.

Briefly Noted

SoftMaker Software GmbH in Düsseldorf, Germany, last week unveiled the beta version of a new release of its Windows-based TextMaker word-processing software. TextMaker 2005 is priced at $49.50 and can also run on the Linux, Windows Mobile, Qtopia and FreeBSD operating systems.

■ JOHN BLAU, IDG NEWS SERVICE

Unisys Corp. last week signed a contract extension to manage call center services for Compania Anonima Nacional Telefonos de Venezuela, a telephone service provider. Under the deal, valued at about $12 million over two years, Unisys will continue to provide services ranging from operator assistance to customer service.

Rambus Inc. and United Microelectronics Corp. have inked a deal for Rambus to provide its PCI Express-based chip-to-chip interconnects to the Taiwanese chip maker. Los Altos, Calif.-based Rambus announced last month that it had souped up its memory technology to improve picture quality in game consoles and high-end PCs.

■ DAN NYSTEDT, IDG NEWS SERVICE

IBM Tivoli Unveils CDP Security Tool for the Masses

Product protects laptop, PC data

BY LUCAS MEARIAN

IBM last week released a new data-protection product that keeps a copy of files as changes are made, allowing users to dial back to recover any version of a document they want on local disks and on network servers.

IBM said its new software, called Tivoli Continuous Data Protection for Files, provides real-time data backup for laptops, PCs and file servers by continuously protecting information from computer viruses, file corruption, accidental deletion or theft of a laptop.

Continuous data protection (CDP), or time-addressable storage, saves all changes at the bit level, time-stamps them and moves them off to local or networked disk to be stored.

If a data restore is required, an end user or systems administrator can literally dial back an application to any point in time, even to seconds before a virus struck a server.

Walter Grey, IT manager at Consigli Construction Co. in Milford, Mass., rolled out IBM's CDP software about a month ago to the laptops of half of the company's 150 field workers. He plans to finish the rollout over the next several months. So far, Grey said, he likes the product's ease of use, as well as the cost and time savings it brings his company.

Backing up laptops used to be a full-time job at Consigli, because Grey had to send a technician into the field to back up each machine manually. Now, when users log onto the company's intranet via a virtual private network, local files are automatically backed up to a file server, which replicates the data to a back-end disk array, he said.

Grey said the product "doesn't take a lot of resources out of the machines and does the backup transparently. The fact that it does it transparently is key. I don't want [end users] to know how it works."

Brian Babineau, an analyst at Enterprise Strategy Group Inc. in Milford, said the only unique aspect of IBM's version is that data can be backed up both locally and over an enterprise network. "It's an incremental market for those vendors who already have a backup product," he said.

Competitors' CDP

Babineau said Microsoft Corp. is expected to announce its own CDP product soon, and he anticipates that EMC Corp. will resell another vendor's CDP product. Veritas Software Corp. has already announced plans to ship CDP products in 2006 with two new backup applications code-named Panther and Bighorn.

Chris Stakutis, chief technology officer of the new IBM Tivoli Software offering, said the software can also be configured to save files in write-once, read-many mode for data protection purposes.

Stakutis said all previous versions of a file are kept in a folder tree, and the software tags the file with a sequence number for easy retrieval. The files are then presented in order of the date and time they were created.

Pricing for IBM's CDP starts at $35 for the desktop version and $995 for file servers. **56459**

Correction

IN THE AUG. 8 Page One story "Users Speed Feeds to Data Warehouses," the name of Jeff Garzella, vice president of data warehousing, reporting and analytics at Overstock.com Inc., was misspelled.

Continued from page 1

VPNs

applications, Akyuz added.

In another new deal, MCI Inc. last week announced a contract with AMF Bowling Worldwide Inc. in Richmond, Va., to connect 350 bowling alleys via MCI's IP VPN Broadband Service. The VPN setup will replace a satellite communications system that sometimes suffers from slow performance, said Rohana Meade, vice president of IT at AMF.

The deal between AMF and MCI is valued at $1.27 million over three years. Akyuz said the annual cost to Stride Rite for its VPN will be about $400,000 under a two-year contract with Paris-based carrier Equant Inc. and GoRemote Internet Communications Inc., a managed services provider in Milpitas, Calif.

According to both Akyuz and Meade, cost was a major factor in their companies' decisions to choose VPN services.

AMF looked at connecting its bowling centers via frame relay a year ago, but that would have been "at least twice as expensive" as the IP VPN approach, Meade said.

At Stride Rite, Equant has provided a frame-relay connection to manufacturing sites in China for the past two years, allowing shoe designers in the U.S. to talk with plant managers via videoconference links, Akyuz said. He added that Stride Rite considered various alternatives for connecting its stores, but "at the end of the day, [a VPN] was the best solution."

VPN Advantages

Nearly all the major network service providers are marketing IP VPN offerings as a replacement for frame relay, said Ron Kaplan, an analyst at IDC in Framingham, Mass. Kaplan said VPNs are usually less expensive than frame-relay networks, although the cost differences have narrowed as carriers have lowered the price of frame relay to keep it competitive.

Sales of IP VPN services in the U.S. last year amounted to $640 million, according to IDC, which forecasts that sales will grow to $3.3 billion in 2009 — an annual growth rate of nearly 40%. This year, sales are expected to total just over $1 billion, Kaplan said.

Meanwhile, the number of frame-relay ports is declining. IDC counted 1.3 million ports in the U.S. last year, a number that is expected to drop to 1.2 million this year and fall to 751,000 in 2008, said analyst Steven Harris. "Frame [relay] is definitely decreasing, and more and more carriers are eliminating it completely," he said.

An IDC survey of 400 U.S. companies that was released in June found that IP VPNs had become the third most popular primary WAN configuration, behind private lines and broadband links. Frame relay was fourth, and 55% of the respondents said they plan to migrate traffic away from that technology over the next two years. About one-third said they will shift toward VPNs.

STRIDE RITE'S VPN will support a new point-of-sale system and added applications, says CIO Yusef Akyuz.

Stride Rite's IP VPN will allow store workers to check on inventory at other nearby locations and will support a new customer-loyalty program. The faster performance should also significantly shorten checkout times for shoppers, with the payment process "taking seconds instead of minutes," Akyuz said.

Meade said AMF's existing satellite network is shared by the 350 bowling alleys, with downlinks running at up to 12Kbit/sec. and uplinks as much as 256Kbit/sec. But depending on how many end users are on the network at once, "it could be very fast or very slow," she added.

MCI's IP VPN service will support 128Kbit/sec. or faster connections to each facility, allowing AMF to train workers via the Web and add a customer reservation system that lets bowlers book lanes online, Meade said.

Stride Rite plans to connect 24 shoe stores to its VPN by year's end and bring the rest online by mid-2006. AMF has connected five bowling centers thus far and plans to finish its rollout within the next 12 months. **56452**

Sun Exec Expects StorageTek Buy to Revive Sales

BY LUCAS MEARIAN

Sun Microsystems Inc.'s $4.1 billion acquisition of Storage Technology Corp. is expected to close next month, leaving in its wake a smaller independent tape-vendor market. **Mark Canepa,** *executive vice president of the Network Storage Products Group at Sun, spoke with* Computerworld *last week about how the company plans to incorporate StorageTek into its storage operation.*

What is your overall strategy for incorporating StorageTek into Sun? We have 15 teams that are part of the integration process. Each is chartered with finding cost synergies in their area but also finding the revenue synergies.

How many workers will be laid off as a result of this acquisition? We don't know that yet. Obviously, it would be very premature to discuss that now as we're trying to operate as two separate companies. You can imagine the disruption that could have in both companies. Once we close, we'll be able to look at it in more detail and be able to make some more-explicit announcements.

How will StorageTek boost your storage strategy? We don't believe we're product-constrained. We believe we're coverage-constrained. Our products and solutions and capabilities are in excess of the size of the sales force we've got out there.

The first thing StorageTek brings is 1,000-plus salespeople, which massively increases our coverage. The second thing it does is it augments [the] sales reps at StorageTek. The third area is that many StorageTek [customers] are not Sun customers.

[This] allows us to expose [StorageTek customers] to more than just mainframe servers. Over time, we believe that can yield additional revenue synergies.

How do you convince Sun's 300-person sales force to sell another company's products? We're going to end up with one storage sales force. All of a sudden, there's one price list. It's not a Sun sales rep vs. an STK sales rep. They're all going to be Sun sales reps. It's going to be Sun's storage product price list. They're very rapidly going to be under one set of rules and quota.

What's your go-to-market strategy for StorageTek's products? We've been [reselling] a number of STK products for a long time. For a number of other [products], they're going to be on the Sun price list for the first time after the acquisition. A lot of the improvements in our go-to-market strategy is that we can begin to broadcast a much broader value proposition. We can talk about [information life-cycle management] in much broader terms than what STK would do all by itself.

Is your purchase of StorageTek a foreshadowing of further market consolidation? We think the IT market is in a consolidation phase. Sun CEO Scott McNealy talked about it. He said in general that we want to be one of the consolidators of the IT market. We intend to be on the consolidating side of all of this.

> **"The first thing StorageTek brings is 1,000-plus salespeople, which massively increases our coverage.**

With Sun buying StorageTek and EMC partnering with ADIC, there aren't a lot of independent tape vendors out there. You're right. Right now, there's Quantum, ADIC, IBM and Sun. You still have Overland [Storage] out there. We're definitely going to get down to a handful of archival companies.

How do you address product overlap, particularly with your content-addressed storage line? We've been working pretty hard on that. We're not in the position of revealing any data at this point. What I can tell you is you're going to find when you dig into this stuff [that] there's a lot less overlap than might first appear.

You've been losing market share to IBM, EMC and Hewlett-Packard. How do you regain it through this deal? The way we gain market share, we believe, is not primarily due to a bigger product line. It's being able to get feet on the street. It's about being able to get a sales force out there that can go toe to toe with the storage sales forces of our competitors. **56440**

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J.D. Power and Associates 2005 Major Provider Business Telecommunications Services Study Broadband Data segment includes services such as DSL, cable modem, ISDN, T-1, ethernet and videoconferencing services. Study conducted among 5,178 businesses with 2-500+ employees that subscribe to multiple providers in the broadband business telecommunications market. www.jdpower.com

MARK HALL

The Search War

A NEW BATTLE for the desktop is under way. This isn't your old-fashioned Linux or Mac vs. Windows tussle, where arcane issues over operating systems enthrall systems administrators and enthusiasts while boring everyone else to tears. This turf war is about things that matter to end users, which is not necessarily the best news for IT.

MARK HALL is an editor at large at *Computerworld*. You can contact him at mark_hall@computerworld.com.

The latest salvo in the new desktop skirmish was fired by Google last week when it released Desktop 2, a search program for Windows PCs, and Google Talk, an instant messaging client. By combining those offerings with Gmail, its free e-mail service, Google now is kicking at Microsoft's castle gate, announcing its attack upon, if not actually threatening, Redmond's long rule over the desktop.

Google, of course, is not trying to displace Windows. In fact, it's exploiting Windows to deliver higher-level services that end users desire. These are services that someday may become revenue streams for Google. And you know that just grates on Microsoft.

Desktop 2 is appealing. It improves the lives of information workers by combining the singularity of information on their own machines with the panoply of sources on the World Wide Web in a single search. It delivers the results in one relatively clutter-free window. It's simple, yet amazingly powerful.

Desktop 2 comes with Sidebar, a vertical strip that anchors the side of your PC's display. Within its tiered windows, you get RSS feeds, news stories, e-mail from your Gmail and Outlook accounts, weather reports and other dynamic content. It's slick.

Desktop 2 is not to be confused with Desktop Search for Enterprise, which lacks Sidebar but can index and search everything its junior partner can, as well as content stored in Lotus Notes. The Enterprise version also gives administrators critical tools, such as the ability to define files that aren't permitted to be indexed and to force all indexes on everyone's machines to be encrypted. Google recommends that you do this.

Individuals can download the Enterprise version, just as they can the consumer-oriented Desktop 2, and use it on their own systems. My limited use of both tools leads me to conclude that they, or something very much like them, will become de facto on corporate machines. That's because they are useful and easy to use.

From IT's perspective, though, Desktop 2 and Desktop Search for Enterprise are, at best, more software you'll need to understand, if only for the sake of handling queries from the clueless end users who haunt our Shark Tank each week. At worst, these indexing programs might become another security headache.

I suggest that you get a head start on your end users and quickly roll out Desktop Search for Enterprise, or a comparable desktop search product that also efficiently searches online. (And no, the stupid puppy that comes with Windows XP does not qualify.) If that's not possible, at a minimum set companywide policies for how those tools should be set up. Make encryption mandatory. It does slow down retrieval a bit, particularly when Notes files are being searched, but few end users will complain.

Another problem I foresee for IT is that once users get accustomed to searching their desktop apps along with the Internet for content, they'll be asking for you to use Google's (or whoever's) APIs to include corporate apps in the single-search process. That's more work and another security hole to cover.

Is this potential troublemaker of a tool worth it? Yes, every penny. I did tell you that it's free, right? **56422**

Don Tennant will return next week.

DAN GILLMOR

Vendors Are Keeping Too Many Rights

WHEN I CONSIDER the big issues in the world of information technology and policy, I invariably return to a single word: *control*.

Control encompasses any number of things. But as we move into an era of increasing digital content in our everyday lives and jobs, at the top of the list is the question of who's in charge of information.

At one time, we imagined that we were. We'd buy a product, and if we wanted to tinker with it, that was no one's business but our own. Now, as ones and zeroes become embedded in everyday products and services, we answer to the sellers as much as the other way around.

DAN GILLMOR, a writer based in Silicon Valley, is the author of *We the Media: Grassroots Journalism by the People*, (O'Reilly Media Inc., 2004). Contact him at grassroots@gillmor.com.

Technology vendors strive for lock-in. They lock us in with obvious tricks, such as Microsoft with its file formats, a monopoly mechanism as pervasive as its Windows desktop control. They control us with digital rights management (DRM, more properly called digital restrictions management) schemes that force us to break the law to make backups or even to quote from other works.

They forbid us from tweaking or substituting, as ink-jet printer companies try to do when they misuse copyright laws to make life hard for other companies that want to sell us cheaper ink. They create cartels and impose rules like the DVD regional coding scheme, which keeps us from watching a movie we buy in Europe on a DVD player we bought in the U.S.

Governments do their part. They use regulations to keep vital technology from becoming ubiquitous, such as the U.S. government's export-control restrictions that still give most e-mail messages all the data security of postcards. It just goes on and on.

The most onerous controls are being exerted against the least powerful players in this game: end users, who have the least individual leverage against big companies and governments. IT has more leverage because it's a bigger customer.

No doubt, some in the IT community have used their leverage wisely, though the typical outcome seems to be a price reduction from vendors, not any serious divesting of vendor control. It's not hard to understand why. The path of least resistance is always alluring when budgets and time are constrained. It was once true that no one got fired for buying IBM, partly because IBM, for all its monopolistic reach at the time, did a pretty good job. For all its ruthless business practices, Microsoft has been steadily improving products aimed at enterprises.

The move toward open-source software has been one of the truly heartening occurrences in recent times. IT has seen the financial advantages, which may not be as overwhelming as open-source advocates claim but are nonetheless real in many, if not most, cases.

More important is the open-source advantage in the freeing of data and choice. Portability is the most essential escape valve in any data relationship. If you can move it without incurring massive costs, you have leverage. If you can't, you don't. With open-source products, you do.

I have no religious attachment to open-source vs. proprietary software. I use both. But I consider my data mine, period, just as I consider it my right to back up what I buy and quote from others' work — with appropriate citation — in creating new works of my own.

The technology and entertainment industries don't believe in such rights. For everyone's sake, I hope IT will fight back, and hard. **56373**

VIRGINIA ROBBINS

Fewer CS Majors Not a Big Concern

MY NEPHEW Matthew is 21, an age when anyone who knows how to cook is his best friend. He has stopped growing, at 6 feet 3 inches tall, but he's still as skinny as a fishing pole. I love to cook, and at a recent family reunion, he joined me in the kitchen.

I'd read that graduation rates for women in computer science were still hovering around 25% and that overall graduation rates for computer science majors had declined from a high point in 2000. Since Matthew is currently in college, I asked him for his observations and why he hadn't taken up computer science.

VIRGINIA ROBBINS is CIO and managing director at Chela Education Financing in San Francisco. Contact her at v_m_robbins@yahoo.com.

I was pleasantly surprised to find that his roommate is in computer science. Matthew told me he's really into gaming and entered computer science as a back door into making money in gaming. Yes, there are quite a few women in the classes, but male or female, they all look the same to Matthew: pale, out of shape and with long fingernails. These men and women aren't antisocial. That myth was busted when advanced games started to be played over networks and the gamers all began to interact online.

Matthew said he isn't in computer science because, well, the lifestyle isn't for him. He needs something more active, interactive and tactile.

Matthew's story of his roommate echoed one I had heard at dinner a few weeks earlier from a friend's son. He, too, had decided to enter computer science so that he could do computer gaming.

As someone who years ago started playing Pong and later spent many, many hours expanding houses in The Sims and shooting beasts in Diablo II, I understand why kids would want to be computer game designers and builders. It's just that very few of these skills are useful in the corporate world. (OK, there is a parallel that involves bathroom breaks. Neglect them in a long meeting or with your Sim, and bad things happen.)

Are all computer science students gamers? Of course not. But I think that these two young men are not atypical in wanting to build a career around an enjoyable diversion. After all, making a career around what you like is exactly what the book *What Color Is Your Parachute?* is all about. Outside of simulation training, though, gaming skills don't help corporations. In fact, very few computer science degrees are useful to most corporations.

Corporations need accountants, marketers, and operations and manufacturing staffers who are infused with computer skills. The PC and Internet revolutions have been all about moving information closer to the decision-maker and, in the corporation, closer to those who need the data.

So is it a problem that fewer students are graduating with computer science degrees? Absolutely not. If we assume that a capitalist society will continue to reward innovation and protect intellectual property, then the best minds will continue to migrate to the best research centers, regardless of where one graduates.

Much has been said about the University of Florida study on the effect of video-game violence on children. Just as I wouldn't take Matthew's 7-year-old cousin to an R-rated film, I wouldn't let her play Doom or Grand Theft Auto, regardless of how much I enjoy the games myself. But I am encouraging her to play Sims and the huge stash of computer learning games that her family has given her. With gaming, we older ITers have found the way to win the hearts of teenagers and twentysomethings everywhere. **56361**

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READERS' LETTERS

Wireless or Not, Trespassing Is Wrong

HOORAY for Richard Dinon and the St. Petersburg, Fla., police ["Man Arrested for Hopping Onto Home Wi-Fi Network," QuickLink 55503]. I hope that the state attorney prosecutes this criminal to the full extent of the law.

I am especially appalled by the comments of Ken Dulaney of Gartner, who blames the homeowner for being the victim of the crime perpetrated upon him. Would Dulaney feel the same if his home were broken into or his identity stolen? Those acts, and the accessing of another's wireless network without permission, are crimes, and if they were not criminal they would still be unethical.

My guess is that Dulaney's opinion does not align exactly with Gartner corporate policy. If I were to gain access to Gartner assets illegally, would the company feel that I then had the right to sell them because Gartner did not protect them well enough? There may be differences between the real and virtual worlds, but in either case, taking what belongs to others is wrong.

Daniel A. Combs
President,
Global Identity Solutions LLC,
Falls Church, Va., dan.combs@globalidentitysolutions.com

Old Lessons Anew

IT SHOULD NOT be surprising that consumers' responses to privacy breaches are similar to their responses to other attacks on their sense of personal security ["Opinion: After a Privacy Breach, How Should You Break the News?" QuickLink 55301]. Though the Ponemon Institute's findings appear to be among the first to ask these kinds of questions in situations involving IT and the financial industry, these results aren't substantially different from findings about consumer relations following the Tylenol and Excedrin scares of the last century. Two of the fundamental findings in those situations, taught at virtually every business school today, are that the companies whose products are involved must be proactive about resolving the problem and must take a proactive approach to preventing further breaches.

V. Hetrick
Los Angeles

A Home on the Web For OS/2 Refugees

OS/2 USERS ["OS/2 Loyalists Remain as the Operating System Fades Away," QuickLink 54736] still have a home on CompuServe in the OS Refuge folder of the Linux Forum [QuickLink a6920]. Members of CompuServe's former OS/2 forums still drop by. The Linux Forum manager is one of the "OS/2 advisers" of the late OS/2.

Doug Yriart
Manager, CompuServe Linux Forum, Washington, dyriart@compuserve.com

Ham Radio Can Help in Emergency

THE ANSWER to the problem outlined in the story "Attack in U.S. Would Tax Emergency Tracking for Cell Phone Users" [QuickLink a6810]: Acquire an amateur radio license. This will give a person worldwide communications with just a small radio.

Kevin Adam
Fort Wayne, Ind., n9iww@verizon.net

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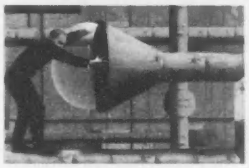
TECHNOLOGY

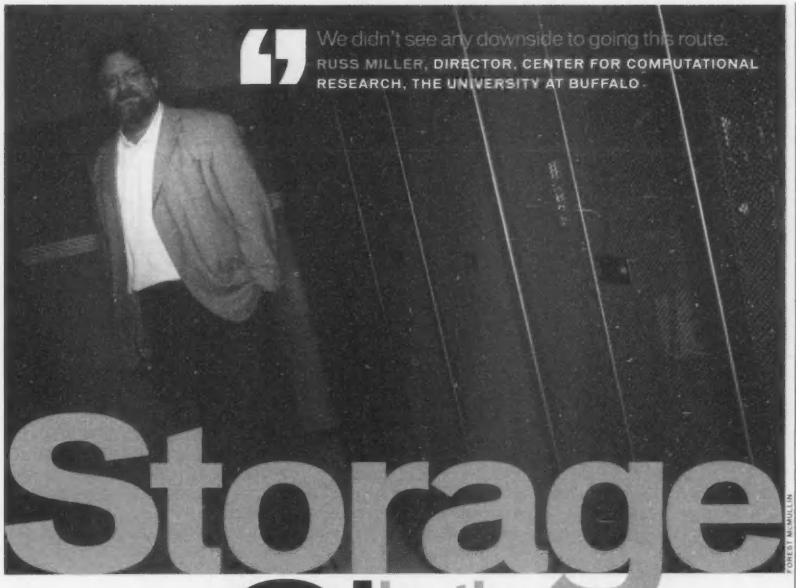
08.29.05

Up to Capacity
Capacity planning helps companies locate current bottlenecks or wasted capacity, as well as strategize to meet future infrastructure needs. **Page 24**



QUICKSTUDY
Protocols
A protocol is a set of formal rules that describe how devices or software can exchange information with one another across a computer or communications network. **Page 27**

SECURITY MANAGER'S JOURNAL
Peers Say Cisco Ended Up Wearing the Black Hat
After the brouhaha over the Cisco IOS vulnerability, C.J. Kelly asks some of her colleagues what they think of the situation. **Page 28**



We didn't see any downside to going this route.
RUSS MILLER, DIRECTOR, CENTER FOR COMPUTATIONAL RESEARCH, THE UNIVERSITY AT BUFFALO

FOREST McMULLIN

Storage by the Cluster

Massive throughput and the ability to add capacity on the fly are making clustered storage an attractive option. By Lucas Mearian

RUSS MILLER RUNS a monster of a server cluster that eats storage at an incredible rate. The bandwidth requirements alone on his 22TFLOPS system force Miller to look outside the storage box, so to speak, for better throughput and scalability.

As the director of the Center for Computational Research at the University at Buffalo, Miller oversees a supercomputer comprising 6,600 processors that is used by the university and many businesses in western New York.

To support all that computational power, Miller turned to a clustered storage system that could alleviate bottlenecks and automatically load-balance and grow on the fly to accommodate user demand.

Like many IT managers who have seen the benefits of server clusters, Miller chose to try the relatively new technology of storage clusters as a means of attaining a fully redundant infrastructure that's highly scalable and easy to manage. Clustering provides massive throughput because of an increased port count that comes from cobbling many storage servers together into a single pool of disks and processors, all working on a similar task and all able to share the same data.

Management functions are distributed across the storage server farm. To an application server, the farm looks like a single, block-level storage system. Storage capacity can be added without disrupting applications running on the cluster.

There's lots of talk about storage clustering among vendors these days, but few market leaders have fully embraced the concept, according to analysts. Most of the development is still being led by start-up companies such as Ibrix Inc., Isilon Systems Inc. and Intransa Inc.

In April, Miller selected a system from Dell Inc. and Billerica, Mass.-based Ibrix that gave him storage read rates of 2.3GB/sec. and about half that rate for data writes — far above what any monolithic storage array could produce, he says.

"We don't have any single points of failure. So if and when we need to make additional investments in storage, we can do that without any major downtime or major reconfiguration. We didn't see any downside to going this route," Miller says.

Tony Asaro, an analyst at Enterprise Strategy Group in Milford, Mass., agrees. "The beauty of some clustered architectures is you can start small and grow as much as you want," he says.

The University at Buffalo's storage cluster consists of three EMC CX700 storage arrays, each with 70 146GB drives that are managed with Ibrix's software.

"If one of these I/O nodes goes down, we won't lose anything except a little performance," says Miller.

Ibrix is a clustered file system than runs on hosts, but it can also run on storage arrays. For example, the internal disk drives on low-end Dell servers can be combined to create a storage pool. The result is a compute farm that also clusters its storage. "It adds no greater complexity by adding more servers to the cluster," Miller says.

In the future, he notes, the university will consider using commodity servers to create a storage cluster, "so long as the system meets the needs of our users and staff in terms of performance and

reliability."

There's some confusion about the definition of clustered storage. Vendors describe several different technologies as clustered storage — from disk pooling to virtualization.

A true storage cluster should be able to scale linearly without bottlenecks or added management difficulty, according to Enterprise Strategy Group's Asaro.

"NetApp has been guilty of using the word *clustering* for many years. We used to use it as a fail-over term," says Jeff Hornung, vice president of enterprise file services and storage networking at Sunnyvale, Calif.-based Network Appliance Inc. "Clustering for scalability is what we're talking about."

NetApp offers a dual-node cluster, or two network-attached storage (NAS) boxes together in a pair that provide greater redundancy but don't fit what Asaro and others would consider a true cluster: a system with the ability to scale linearly without adding complexity.

Definition: Storage Cluster

A networked storage system that allows users to add nodes, all of which access the same pool of data. Arrays work together as an intelligent team, capable of running on their own and communicating with other arrays to deliver data in response to user needs.

IBM's SAN Volume Controller appliance and 3Pardata Inc.'s Inserv arrays allow storage clusters to grow in eight-node increments, but data sharing is confined within those eight nodes. Other companies, such as Isilon, Ibrix and LeftHand Networks Inc., allow clusters to grow one node at a time, with data being shared throughout the cluster, no matter how large it becomes.

Two Categories of Clusters

Clustered storage falls into two categories: systems that combine block-based data on a storage-area network (SAN), and those that create a common file name space across NAS filers.

To date, most of the major storage vendors — Hewlett-Packard Co., EMC Corp., Hitachi Data Systems Corp. and NetApp — have released technology that can virtualize NAS systems by pooling disk capacity behind NAS engines. All claim to be developing or evaluating third-party clustering technology as well. Meanwhile, start-ups such as Isilon, PolyServe Inc. and Panasas Inc. are already offering clustering software that runs across Windows and Linux.

Sonja Erickson, vice president of technical operations at Kodak Easy Share Gallery, a service of Kodak Imaging Network Inc. in Emeryville, Calif., says NAS clustering technology has already saved her company hundreds of thousands of dollars in personnel costs alone.

The Kodak unit uses clustering technology from both Seattle-based Isilon and Beaverton, Ore.-based PolyServe to connect hundreds of Wintel servers at Kodak that host its online digital photo image service. Erickson has a staff of five people to manage more than a petabyte of data on the servers.

"In terms of staffing, since we installed [a NAS cluster from Isilon] a year and a half ago, we've hired no additional staff," she says. "That's hundreds of thousands of dollars saved. In terms of efficiency, it takes only a day to get the systems up and running."

Prior to installing NAS clusters, Erickson used direct-attached SCSI arrays that lacked scalability and could take up to a month and a half to get online. In contrast, the PolyServe boxes require about a week, and Isilon's take about a day, she says.

EMC offers clustering technology in its Centera content-addressed storage array, as does HP through its Remote Installation Service platform. Both products, however, are targeted at online archival uses. "These are clusters, but the object is not performance," says Bob Passmore, an analyst at Gartner Inc. in Stamford, Conn.

Most of the large vendors are interested in using Intel-powered servers for storage clusters because of the enormous growth in the use of Linux clusters in server farms.

"The requirements for availability are a long way from what a bank would need. Typically, banks are looking for tons of computing and storage capacity. And while you get lots of performance, the trade-off is low availability. IBM has a group focused on this problem," Passmore says. "But we're going to see more and more of this stuff, especially the cheap nodes used to create storage clusters."

Most of the adoption of clustered storage is being spurred by the technology's relatively low cost, adequate performance and high levels of redundancy and throughput.

Vendors

Clustered Storage

- Isilon Systems Inc.
- Archivas Inc.
- Compellent Technologies Inc.
- LeftHand Networks Inc.
- EqualLogic Inc.
- Xiotech Corp.
- Intransa Inc.
- Exanet LLC
- Panasas Inc.
- 3Pardata Inc.
- Acopia Networks Inc.

Virtual Tape Library Clusters

- Sepaton Inc.
- Diligent Technologies Corp.
- NearTek Inc.

Reluctant User

Ron Minnich, team leader of the Cluster Research Lab at Los Alamos National Laboratory in New Mexico, is a reluctant fan of clustered storage because it scales with his needs and gives him the throughput to support a 1,024-node, $6 million Linux server cluster. The cluster, called Tank, works as a supercomputer for crunching scientific equations.

Tank is backed by a 64-node storage cluster from Fremont, Calif.-based Panasas.

"In terms of pricing, it cost more than a NetApp [NAS array] per terabyte," Minnich says. "I have it mainly because of its ability to sustain throughput from our server cluster, which you can't achieve with a standard file servers, which have one network connection."

Minnich says that each of the storage blades on the Panasas system has an individual Gigabit Ethernet connection, giving him 64 individual network connections.

"It's not as reliable as a mature product. I had computers when [the Network File System protocol] first came out. There was a certain failure rate. This system is like the early failure rate that NFS had years ago," he says.

Ron Godine Jr., manager of IT operations at Royal Appliance Manufacturing Co. in Glenwillow, Ohio, had been supporting his Oracle 11i ERP system with two EMC Clariion 4700 arrays prior to buying LeftHand SAN Filers, which are clustered using Microsoft Cluster Server for high availability.

Godine laments that each time he had to upgrade his EMC array, there was an arduous series of planning and implementation steps that had to be carried out with the help of the vendor. "It became a fairly drawn-out process to get the equipment working and figure out a number of problems," he says.

The three-node cluster from Boulder, Colo.-based LeftHand Networks gave Godine about 6TB of storage capacity for $31,000 — about half the cost of his EMC arrays. "And the maintenance is significantly cheaper," he says. "I was able to get the equipment up and running in-house. We thought we'd done something wrong because it was so simple."

Godine's greatest concern in moving away from time-tested EMC equipment was the performance on the new cluster technology, which he says surprised him.

"We found performance on this cluster faster than local disk and certainly much faster than using CIFS [Common Internet File System] on these monolithic file-sharing systems," says Godine, who adds that when used in the SAN configuration, the cluster is comparable to monolithic boxes.

Godine says the ability to scale as needed was also an enormous draw. "If we needed more bandwidth to hosts, we could do it by adding more building blocks," he says.

In theory, managing storage clusters should be no more difficult than managing a single array, but some users say their management interfaces could still use some tweaking.

But most, like Godine, say clustered storage's strengths outweigh its drawbacks. **56197**

CLUSTERED ROI

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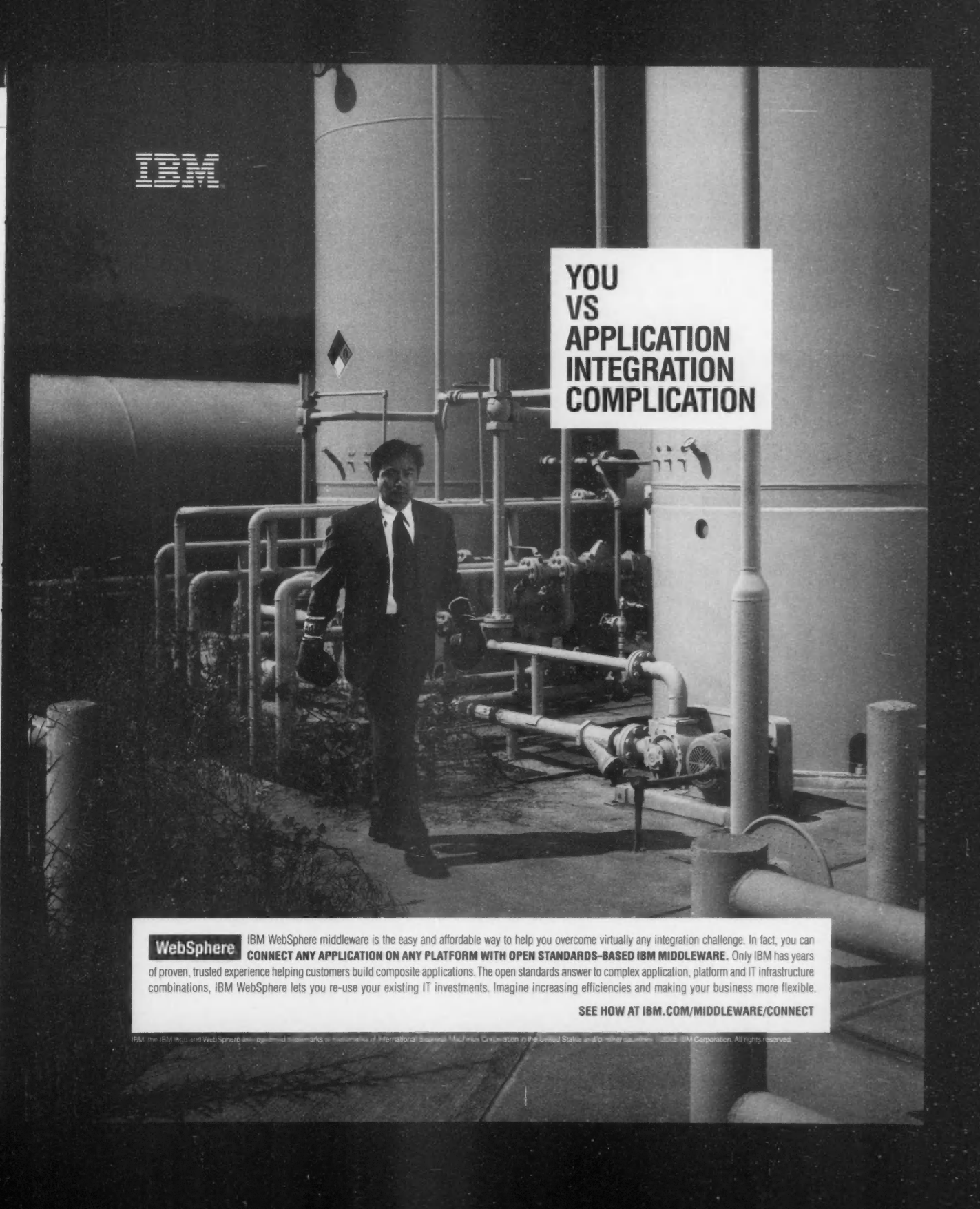
QuickLink 56207
www.computerworld.com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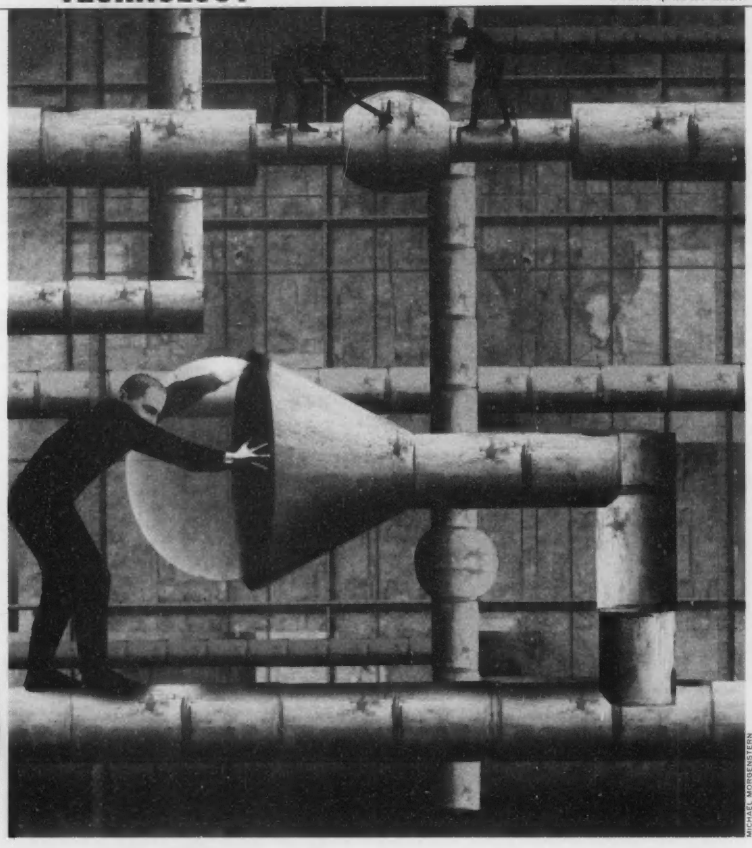
MICHAEL MORRISTEIN

UP TO CAPACITY

Companies are using capacity planning to find bottlenecks and match IT resources to business needs. By Drew Robb

GLOBAL OIL COMPANY ConocoPhillips was all set to roll out SAP AG's Business Information Warehouse for users in Perth, Australia, but the early reports on the project weren't good.

"This was a high-profile project, and some application owners were telling me that the network had a 15-second delay," says Dave Strobel, operations supervisor in ConocoPhillips' global information systems network operations group.

The application resided on servers in Bartlesville, Okla., where Strobel works, with a 2Mbit/sec. E1 connection to Perth. There was a demand for more bandwidth. But a new international circuit would have entailed a significant multiyear expense and required 60 workdays to set up, meaning it wouldn't be ready by the go-live date.

So Strobel handed the problem off to Bethesda, Md.-based Opnet Technologies Inc., which had been trying to sell him its network capacity planning software. Opnet did some packet captures and ran tests that took a total of 1,400 seconds to execute, far longer than they should have.

Opnet took the test results and modeled what would happen if the bandwidth to Australia was increased from 2Mbit/sec. to 20Mbit/sec. That cut only 0.38 seconds off the 1,400 seconds. Next, it modeled what would happen if the capacity was cut to 256Kbit/sec.; that added only 13 seconds to the transaction, a loss of less than 1%. "Bandwidth clearly wasn't the issue," says Strobel.

"When we looked at that data and analyzed it with Opnet, we found that very little of it was network delay," he says. "But we found a substantial amount of the delay was on the servers in Bartlesville."

The application team solved the problem with the servers, Conoco-Phillips didn't have to spend money on a multiyear contract for a multimegabit international pipe, and Opnet made the sale.

Capacity planning — the process of predicting IT needs, often with the help of software — has long been regarded as something of a black art. The feeling was that only a specialist with a degree in statistics could do it, and even then, the results were questionable.

But capacity planning tools are becoming easier to use, and companies are finding that they can help solve a wide range of long- and short-term bottlenecks. Tools now autodiscover network devices and connections, for instance. And pull-down menus allow for quicker configuring of models. Since those features shorten the time it takes to run scenarios and provide faster answers, the tools are being used to solve current problems, not just to estimate the upgrades that need to be included in next year's budget. As a result, the software is no longer shelfware.

"The big thing that's new in the area of capacity planning is that people are actually doing it," says Laura DiDio, an analyst at Yankee Group Research Inc. in Boston.

But as the tools have gotten better, the systems they need to model have gotten more complex. In many cases, users are no longer just trying to develop a utilization trend line for a single CPU or disk ar-

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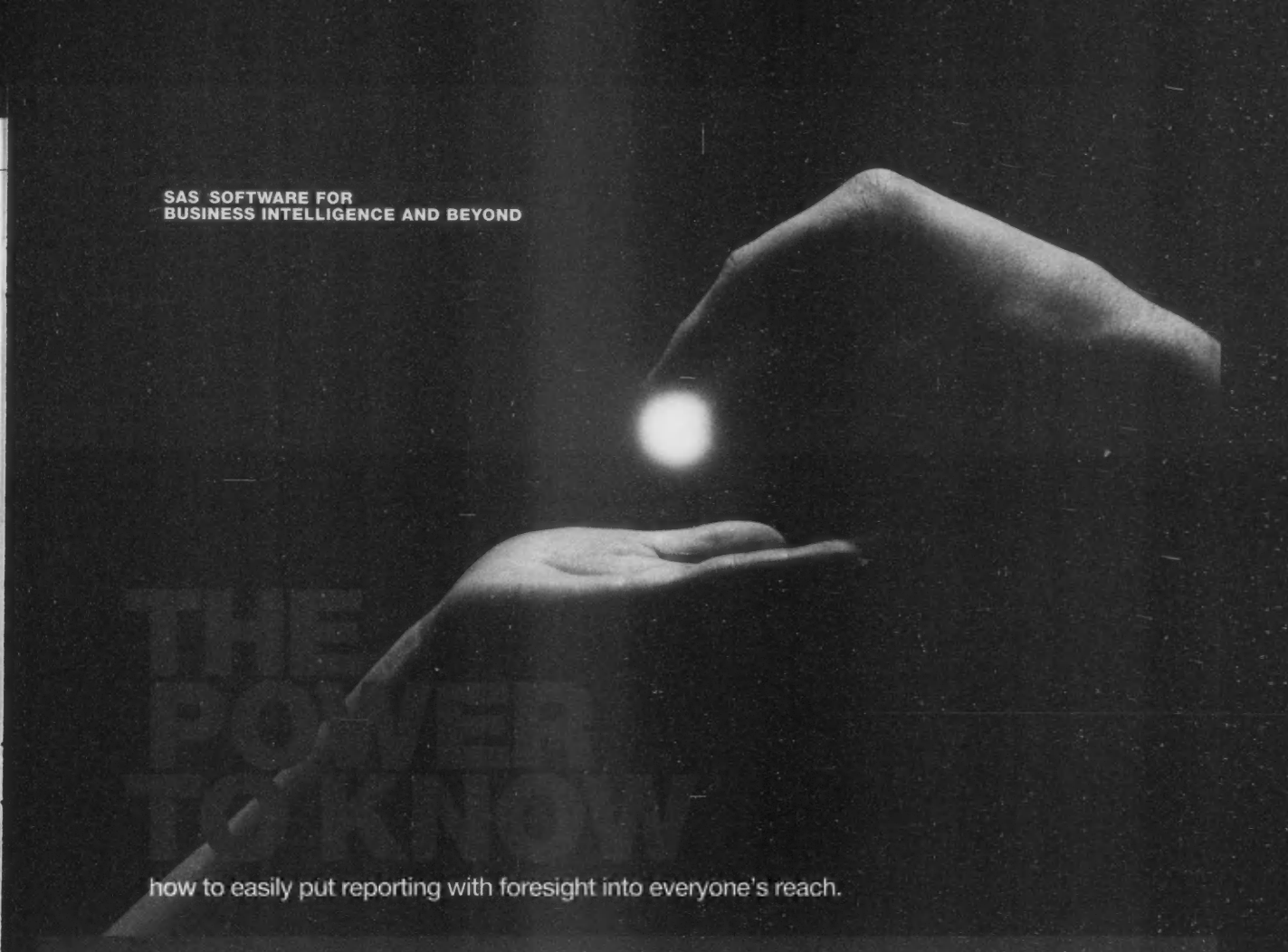

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Continued from page 24

ray. Instead, they might need to model a multitiered Web application to see whether the latency will come from the database, the application or the Web server. And virtualization raises its own challenges, since in that case, users aren't modeling against a set hardware configuration.

"As the environment becomes more virtualized and companies take on dynamic provisioning, it is a whole different story," says Audrey Rasmussen, a vice president at Enterprise Management Associates Inc. in Boulder, Colo. "The infrastructure will be morphing and changing so rapidly that a lot of capacity planning methods will become irrelevant because they can't keep up with the speed of change."

A service-oriented architecture adds its own wrinkle. "Then you don't have control over the infrastructure or even visibility into it," Rasmussen says, "particularly if you are subscribing to a service."

Getting the Data

The process of creating an accurate and useful capacity plan begins long before you start modeling the network or servers. First, companies need accurate information on what they have, how it's being utilized and how well it's performing. While this used to be a time-intensive manual task, it can now be done automatically, so capacity planners can just click on the items they want to include in a model. Similarly, gathering performance metrics can also be a routine, ongoing activity.

Pat Moffett is a consulting engineer for capacity planning at Norcross, Ga.-based CheckFree Corp., which provides electronic bill-paying services and software. He pulls performance data from nearly 500 Linux, Unix and Windows servers, as well as three IBM z/OS mainframes, into an IT resource management (ITRM) data warehouse from SAS Institute Inc. About 300GB of data is pulled in daily and incorporated into daily, weekly and monthly summaries. The database also contains business metrics and forecasts.

MAKING PLANS

Capacity planning options include the following:

- **Performance trending:** Graphing past performance and utilization statistics and using these to predict when you will need to add more capacity. This can be done using one or more variables.
- **Load testing:** Testing a piece of equipment or a system at varying simulated load levels and observing the performance. This is good for identifying potential bottlenecks and is often used before deploying equipment.
- **Multitier modeling:** Using capacity planning tools to simultaneously model all the elements of a multitier application and predict the end-user response times.
- **Multiworkload modeling:** A step up from multitier, this takes into account the fact that more than one application will be running over a network at a given time.

Note: More sophisticated methods that allow you to model multilayer architectures with several variables are more time-consuming, and the tools are more costly, but they deliver better results.

Moffett runs reports directly out of the ITRM and does some regression analysis using the SAS statistical procedures. But he also uses other tools for forecasting: For simpler calculations, he imports data into an Excel spreadsheet, and he uses modeling software from HyPerformix Inc. to simulate server capacity.

Getting the performance data is the easy part. Getting the business data takes a bit more skill because it involves coaxing data out of business unit executives rather than network devices. This includes business and service metrics, as well as expansion plans.

"The process of obtaining the business information is the biggest challenge," says Tom Hill, capacity planner at CNF Inc., a Palo Alto, Calif.-based shipping and supply chain management company that uses BMC Software Inc.'s Patrol on more than 60 servers. "At some point, you are going to have to justify your existence, and either you are supporting the business or you are not going to be around much longer."

Now and Forever

Once a data feed is arranged, the next decision is what to do with it. That requires an analysis of which resources are most important to keep running at optimum performance. For the government of Virginia's Fairfax County, the key element is the IBM mainframe running its custom financial, human resources, budgeting, procurement and record-keeping applications. Systems programmer Tom Rose uses Perfman for z/OS from The Information Systems Manager Inc. in Bethlehem, Pa., to model workloads on the mainframe's three logical partitions. He is also using it to determine which model to purchase to replace the county's decade-old machine. Rose is considering an IBM eServer zSeries 890 mainframe, but there are 27 models to pick from, and he doesn't want to get one that's too big or too small.

"We are using taxpayer money, so we have to make sure we get the right size of machine," says Rose. "One thing we have noticed is that we can purchase a machine with more processors, but certain workloads won't be any faster."

CenturyTel Inc., a voice and data services provider in Monroe, La., with more than 3 million customers in 22 states, has hundreds of servers in its data center. But it uses TeamQuest Corp.'s performance management capacity planning software on only about 20 of them. "We have a [Citrix Systems] MetaFrame with hundreds of users," says programmer John Barfoot. "We have so much fail-over in place that if we lost a server, it is not a big deal."

The servers CenturyTel does model are Unix boxes running its data warehouse as well as Amdocs Ltd. Ensemble customer service and billing software, SAP ERP applications and IBM Tivoli systems management software. Barfoot has used the TeamQuest software to cut the number of servers SAP was running on and to model the data warehouse to help the company decide whether to replace the server or simply upgrade the processors. But the biggest benefit came when CenturyTel was switching from a legacy billing system to Ensemble. Hundreds of thousands of customers were being migrated at a time, so Barfoot kept a close watch for potential problems.

"I modeled one of the servers and saw that a very significant bottleneck had fallen off the radar," says Barfoot. "We were able to get that corrected the day before the conversion, and one director commented that TeamQuest paid for itself in that one instance."

Cases like this give capacity planning greater credibility. No, these tools won't catch everything. But, like weather predictions, they're getting more accurate and reliable. Weather.com will give a far better prediction of tomorrow's precipitation than *The Old Farmer's Almanac*, and capacity-modeling tools give a better prediction than linear trending. They won't eliminate the need for keeping an umbrella in the car or some overhead in your server CPUs, but they greatly lessen the chance of getting caught in an unexpected rain or packet flood. **56194**

Robb is a Computerworld *contributing writer in Los Angeles. Contact him at drewrobb@attbi.com.*

CAPACITY MANAGEMENT TECHNOLOGY SCORECARD

Approach:	Linear trending	Multivariate trending	Load testing	Multitier modeling	Multiworkload modeling
What it measures:	Utilization rate	Utilization rate	Response time	Response time	Response time
Best suited for	Individual hardware resource (server, disk)	Hardware resource	Application (test environment)	Application and infrastructure	Application and infrastructure
Prediction validity	Limited to the existing hardware configuration only	Limited to the existing hardware configuration only	Limited to the existing hardware configuration only	Existing infrastructure and projected future infrastructure	Existing infrastructure and projected future infrastructure
Response time/ service-level prediction	No	No	Yes, but limited to tested infrastructure	Yes	Yes
Accuracy for predicting actual response time	Low	Low	Rough estimate of performance in production	High	High
"What if" analysis and predictions	No	No	Limited to varying load levels	Yes	Yes

SOURCE: ENTERPRISE MANAGEMENT ASSOCIATES INC., BOULDER, COLO.

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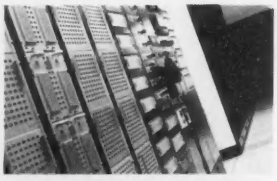

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Registration Open 8:00am - 8:30pm

9:30am – 11:30am	Primer and Tutorial Tracks
11:30am – 1:00pm	Luncheon
12:00pm – 5:00pm	Pre-Conference Golf Outing
1:00pm – 5:00pm	IDC Analyst Briefing
1:00pm – 5:25pm	SNIA Technical Tutorials
4:40pm – 6:30pm	End User Town Hall Meeting
5:00pm – 7:00pm	Speed Dating with IDC: A Channel Partner Networking Event at SNW
7:00pm – 9:00pm	Welcome Reception

TUESDAY, OCTOBER 25

Registration Open 7:00am - 8:00pm

7:00am – 8:00am	Breakfast
8:00am – 12:30pm	General Conference Sessions
12:45pm – 2:00pm	Luncheon
2:10pm – 5:40pm	Concurrent Sessions (IT End-User Case Studies, SNIA Technical Tutorials, Deployable Solutions Tracks)
5:40pm – 8:40pm	Expo with Dinner and Interoperability & Solutions Demo

WEDNESDAY, OCTOBER 26

Registration Open 7:00am - 7:30pm

7:15am – 8:15am	Breakfast
8:30am – 12:15pm	General Conference Sessions
12:15pm – 2:00pm	Expo with Luncheon
12:15pm – 7:15pm	Interoperability & Solutions Demo
2:10pm – 5:40pm	Concurrent Sessions (IT End-User Case Studies, SNIA Technical Tutorials, Deployable Solutions Tracks)
4:00pm – 7:00pm	Expo Open
7:00pm – 9:30pm	Gala Evening with Dinner and Entertainment

THURSDAY, OCTOBER 27

Registration Open 7:30am - 10:30am

7:30am – 8:30am	Breakfast
8:30am – 12:00pm	Concurrent Sessions (IT End-User Case Studies, SNIA Technical Tutorials, Deployable Solutions Tracks)
12:00pm	Conference Concludes

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- ❑ 20,000 or more
- ❑ 10,000 - 19,999
- ❑ 5,000 - 9,999
- ❑ 1,000 - 4,999
- ❑ 500 - 999
- ❑ 100 - 499
- ❑ 50 - 99
- ❑ Less than 50

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- ❑ $500 Million - $999.9 Million
- ❑ $100 Million - $499.9 Million
- ❑ $50 Million - $99.9 Million
- ❑ $10 Million - $49.9 Million
- ❑ $1 Million - $9.9 Million
- ❑ $500,000 - $999,999
- ❑ $250,000 - $499,999
- ❑ $100,000 - $249,999
- ❑ Less than $100,000

What is the estimated annual revenue of your entire organization?
- ❑ Over $10 Billion
- ❑ $1 Billion - $9.9 Billion
- ❑ $500 Million - $999 Million
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- ❑ Determine need to purchase
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- ❑ All of the above

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Protocols

DEFINITION

A protocol is a set of formal rules that describe how devices or software can exchange information with one another across a computer or communications network.

BY RUSSELL KAY

IN CLASSICAL GREEK, the word *protocollon* (literally, "first leaf") referred to the first sheet of paper or papyrus in a scroll, which was actually glued to the wooden scroll itself. By custom, this sheet was used to describe the contents of the entire scroll. When books replaced scrolls, the protocollon continued as a table of contents page glued into the front of the book.

QUICK STUDY

For a long time, the word *protocol* was used primarily to refer to the etiquette of diplomacy and formal arrangements of affairs of state — seating arrangements, how to address dignitaries and so on. Later, the term became a name for a type of treaty or international agreement. Perhaps the best known of those in recent memory are the Montreal and Kyoto protocols, which are environmental agreements on greenhouse gases and global warming.

But information technology has co-opted the term, as it has so many others, giving it new meaning in an entirely different context. As first applied to technology in the 1950s, protocols were rules governing communication between electronic devices such as radios and telephones.

As electronic communication grew and computers came into widespread use, computing protocols were created to control the design of and interaction among various types of networks.

IT protocols today describe any set of rules that allow different machines or pieces of software to coordinate with one another unambiguously. The use of communication and computing protocols requires a common message format and an accepted set of commands that all parties to a communications exchange will understand. Thus protocols ensure that electronic communication transactions follow predictable, logical sequences.

Ethernet's Value

A protocol is an agreed-upon set of rules typically used by network designers and developers to resolve a particular communications challenge. A protocol must be generally accepted as an industry standard before it can be widely used. A protocol becomes a standard when a standards development organization or other respected group recognizes and codifies it.

For example, Ethernet is a LAN protocol that forms the underlying transport vehicle used by several upper-level communication protocols, including TCP/IP. Originally developed by Xerox Corp., Digital Equipment Corp. and Intel Corp., Ethernet has since become a formal standard, accepted by the Institute of Electrical and Electronic Engineers Inc. as IEEE 802.3.

A frame-based networking technology, Ethernet defines wiring and signaling for the physical layer as well as data packet formats and protocols for the data link layer as described in the International Standards Organization's seven-layer Open Systems Interconnection reference model (see diagram below). Ethernet specifies how data is broken up into discrete packets, how the network will be accessed and how the data is to be transmitted. The protocol also specifies how it will interact with both higher- and lower-level protocols.

Just as standards build upon one another, most protocols depend on other, related protocols to work properly in a broader context. This arrangement is often called a hierarchical protocol stack.

For example, low-level protocols such as Ethernet define electrical and physical standards, the order in which bits and bytes are interpreted and the transmission and error-detection/correction systems used in the bit stream.

Higher-level protocols deal with the way data is formatted, including the syntax of messages, dialogues between terminals and host computers, which character sets are used, how messages are properly sequenced and more. The complete protocol stack supports applications such as Web browsing or end-to-end telephone calls between voice-over-IP telephones.

Today, the Internet, the Web and other private and public networks simply couldn't function without the existence and acceptance of scores of specific protocols. **56406**

WANT TO KNOW MORE?

Protocols.com offers a comprehensive listing of data communications protocols, their functions, structures, and various errors and parameters.

Kay is a Computerworld contributing writer in Worcester, Mass. You can reach him at russkay@charter.net.

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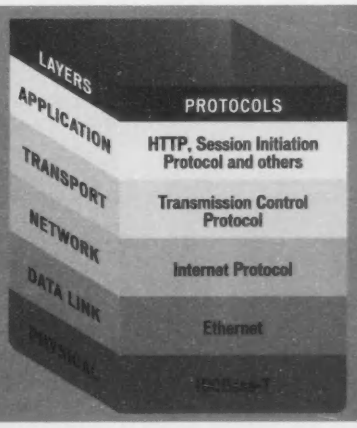
The Internet Protocol Stack

Protocols are designed to be both functionally self-contained and to interact with a variety of higher- and lower-level protocols. Perhaps the best known is the Internet Protocol stack. Each protocol specifies both its own role and how interactions are to take place with related protocols above and below it, from the physical cabling up through the application layer. The work of defining protocols is often conducted within standards groups such as the IEEE and the World Wide Web Consortium.

Although the IP stack shown on the right is monolithic, in practice the protocols used at each level are modular and can be swapped out.

For example, the Session Initiation Protocol is a fundamental application-layer building block for a VoIP stack. SIP can establish, modify or terminate multimedia sessions or Internet telephone calls and invite participants to unicast or multicast sessions. SIP works with client requests and server responses that can be sent through TCP. Or another transport protocol can be used, such as the User Datagram Protocol. At the data link layer, VoIP phones could run over Ethernet or, increasingly, Wi-Fi.

– *Russell Kay*



Peers Say Cisco Ended Up Wearing the Black Hat

After the IOS vulnerability brouhaha, our security manager gets a feel for what her peers think of the situation. By C.J. Kelly

SECURITY MANAGER'S JOURNAL

EVERY YEAR, I dream about going to the Black Hat USA briefings in Las Vegas. I haven't been able to attend yet, but I have a good friend and colleague named Bob who has attended on his own dime and with his own vacation time the past few years.

After every conference, he goes back to work and applies his new knowledge to better securing the environment. Finally, his boss saw the value in sending him, and this year, the company paid for him to attend the event.

Unfortunately, upper management in a lot of companies is still reluctant to send security engineers to one of the world's most useful security conferences. They need to get over that. The feds have wised up, and they now recruit security people at the conference. What does that tell you? It tells me that some of the brightest and best security people hang out at Black Hat.

Getting the Scoop

When it comes to Black Hat, I live vicariously through Bob. He provides me with materials from the conference each year and shares what he learns. As soon as he returned from last month's conference, I pinged him via e-mail and asked him if his name had been on the Wall of Sheep. That's a giant screen in the conference hotel that scrolls the names and partial passwords of attendees foolish enough to access the Internet through the hotel's unsecured wireless system. Of course it wasn't, because he's a security engineer.

This year's event was more newsworthy than most because of the flap that resulted when Michael Lynn gave his talk about the Cisco IOS vulnerability [QuickLink 55863]. Bob sent me the presentation materials from Lynn's talk, and I forwarded them to security colleagues and asked what they thought of the whole brouhaha. My take is that Lynn lost his job at Internet Security Systems Inc. because Cisco had a nervous breakdown and ISS didn't back up its guy. What a shame.

One of my colleagues, a Cisco Certified Internetwork Expert who goes way back, wondered why Cisco would get so upset; after all, Microsoft gets battered for vulnerabilities on a daily basis. What he said next was superb: "It sounds to me like Cisco perceives itself as occupying a firmament above and beyond the mortal IT world, since theirs is a dedicated OS and not a flawed, general-purpose OS. I think they need to take a Valium and just mellow out!" I was surprised at the response, given his top-level Cisco certification.

Another friend, who at one time was the director of emergency preparedness at a major telecom company, had a similar opinion: "This was not Chicken Little; it was a warning — the smoke alarm in advance of a fire.... It was a way to keep the bad guys at bay for just a little bit longer." He also was of the opinion that "bad guys will always attempt to exploit vulnerabilities. This reminds me of the emperor's new clothes — everyone knew there were some vulnerabilities with Cisco; they just had an unspoken pact not to openly communicate those vulnerabilities. Somebody decided this was an issue that demanded attention and decided to be responsible."

> **Not a single colleague I spoke with approved of how Cisco handled the situation.**

I had thought that someone who was responsible for a global network would have been completely panicked by the disclosure. Not so.

Disclosure Debate

Bob's comments about Lynn's choice to disclose the vulnerability were very interesting. I could see his angst over the whole issue of when and where it's appropriate to disclose vulnerabilities that could have a global impact.

"If your security depends on secrecy, you've got no security," he said. "Secrets get leaked, or get discovered by independent research. If Mike Lynn could find it, so could a black hat in Pakistan with al-Qaeda sympathies. Would that person have warned everyone equally? Or would they have disseminated the information differently? Mike Lynn needed to disclose what he found, and I think he did it properly.

"I don't know if I'd call Michael Lynn a hero," he continued. "He's certainly gutsy, a man of his convictions, willing to make sacrifices to do what he feels is right. He's talented in his code analysis. I'd hire him in an instant if I had an opening that fit his skills and talents. And I'm grateful for what he has done. Yes, he opened a can of worms, but he did it in broad daylight, in front of thousands of people, rather than in a dark corner where only a select few could capitalize.

"It's a tightrope," Bob explained. "What one researcher discovers, another can as well. Criminal hackers are not dummies; many of them are highly skilled and adept at finding and exploiting the chinks in the armor. There have been cases of white-hat researchers disclosing vulnerabilities and releasing proof-of-concept exploit code after getting no (or negative) response from a vendor, or after waiting for a patch to be released for several months. I prefer to think that these researchers are acting in the hopes of spurring the vendor to act (rather than simply grabbing the glory of finding the vulnerability). But they are also providing a road map to the criminal hackers, who know that no mitigation is available for a particular vulnerability. Is this appropriate? Well, there's your tightrope, and I don't see a net anyplace."

Yes, Bob tends to be long-winded, and I wish I could share all of his comments. But it's striking that not a single colleague I spoke with approved of how Cisco handled the situation. One person suggested that Cisco should have handed out CDs with the IOS patch to all attendees at the conference. Now, that was a great idea!

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "C.J. Kelly," whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com, or join the discussion in our forum: **QuickLink a1590**

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**

SECURITY LOG

Webroot Unveils Spy Sweeper 2.5

Webroot Software Inc. has released a new version of its enterprise antispyware software. Spy Sweeper 2.5 includes improved spyware-removal features and performs disk sweeps up to 10 times faster than the previous version, said Webroot. Pricing starts at $29.95 per user, according to the Boulder, Colo.-based vendor.

McAfee Adds Tiger Support for Virex

McAfee Inc. announced that Virex for Macintosh now supports the Mac OS X Tiger operating system. Designed for corporate users, Virex 7.7 works with ePolicy Orchestrator, McAfee's central management software. It begins shipping today, according to the security software vendor.

SurfControl Filter Targets Citrix

SurfControl Inc. last week announced the availability of a Web filtering tool designed for Citrix Systems Inc.'s Presentation Server 3.0 and 4.0 environments. SurfControl Web Filter features a reporting and analysis function to help companies monitor Web access and implement rules for access control and performance enhancement, according to the Scotts Valley, Calif.-based vendor of security products.

Panda Offers VPN Protection

Glendale, Calif.-based Panda Software Inc. last week rolled out software to help protect against hacker break-ins via virtual private network connections. VPNSecure is designed to ensure that remote computers attempting to access a corporate network via a VPN comply with prescribed security policies relating to antivirus updates and firewalls. Pricing starts at $42.31 per seat, with a 25-user minimum.

BRIEFS

Asset Management Software Upgraded

Exor Corp. in Bristol, England, has announced the 3.2.1 release of its asset management software. The release features enhancements for enterprisewide consolidation of asset registers and work practices, the company said. Version 3.2.1 offers an interface between Exor and the Oracle E-Business Suite, as well as the ability to model off-network and external assets. Pricing was not available.

SAS Enhances Enterprise Miner

SAS Institute Inc. has announced plans to enhance its data- and text-mining software. Enterprise Miner 5.2 includes new visualization and enhanced Web-mining features. Text Miner adds the ability to analyze documents in PDF, HTML and other formats. Both products will ship in October.

Nexsan Announces Storage Appliance

Nexsan Technologies Inc. has announced Assureon, its first secure content-addressable storage appliance. The device serves as a write-once, read-many storage system. Based on ATA disk technology, the Assureon supports up to 168TB of capacity. Pricing starts at $12,500 per terabyte.

WebLogic Gains BPEL Support

BEA Systems Inc. announced that BEA WebLogic Integration 8.5 includes support for the Business Process Execution Language 1.1 standard. The tool includes enhanced process management and data-transformation features designed to boost performance. Users can develop business processes in WebLogic Integration and export them as BPEL processes or import BPEL processes developed in other tools. WebLogic Integration 8.5 is priced at $62,000 per CPU.

DOUGLAS SCHWEITZER

The 'Virtual' Way to Better Wireless Security

I'VE ALWAYS FOUND the vernacular used in computing very interesting. For example, there's the term *virtual*. In computing, what is called virtual does not physically exist but has been made to appear to exist by some software processes.

DOUGLAS SCHWEITZER is a freelance writer and Internet security specialist in Nesconset, N.Y. He can be reached at dougneak@juno.com.

My first experience with this term was in connection with the use of virtual memory. When an operating system runs out of real (physical) memory, it begins to swap chunks of data from physical memory chips to the hard disk in order to make room for more data. The use of virtual technology certainly doesn't stop with memory, however.

Enter the virtual LAN, or VLAN. A VLAN acts like an ordinary LAN, but connected devices don't have to be physically connected to the same segment. In other words, a VLAN appears to be one large network created from a collection of multiple networks. Today, many organizations use VLAN technology to create expanded LANs comprising hundreds of host machines spanning multiple geographic locations. Essentially, a VLAN allows you to divide your network into segments, creating multiple discrete networks within one physical network and allowing traffic to be filtered between them. Often, an organization creates separate VLANs for different departments or divisions, with each serving as a boundary and improving performance by isolating certain network traffic.

While handy for segmenting Ethernet networks, VLANs can also be used as a security tool for wireless networks. Wireless users are at their greatest risk when in hot-spot environments. For security purposes, VLANs are often used to segregate wireless traffic from other network traffic. Say, for example, you'd like to provide wireless connectivity in your cafeteria or some publicly accessible areas of your organization. For general Internet access, it would be wise to put that wireless network onto an untrusted VLAN that connects only to the outside world and not to your internal network. If internal network access is required, it should still go on a separate VLAN yet have its own firewall connection to the rest of the network. In addition, you can prohibit users from joining the VLAN network by restricting individual access or any unwanted intrusion into a network.

As you can see, VLANs have the ability to provide additional security not available in a traditional LAN environment. And while the proper use of VLANs alone can improve wireless security, you may still wish to employ additional security measures — such as a public-key infrastucture — to keep sensitive data from prying eyes.

With all their benefits, VLANs are, as you would expect, sometimes more costly to implement than traditional LANs. VLANs are essentially WANs and often need to support geographically dispersed locations and extra security; as a result, they can increase overhead. Basically, they're a little more complex to configure than connecting computers together in the same building like with an ordinary LAN.

Configuration of the VLAN may be either static or dynamic. For heightened security, the static configuration is the best and therefore most popular option in today's networks. Static VLAN configurations assign membership to only one port on the switch rather than to the media access control (MAC) address of whatever device is connected to the port.

Less secure (and less popular) are the dynamic VLANs, where VLAN membership is assigned to the MAC address of the device or host. In short, when a port that's configured to support a VLAN connects with a host, the switch will determine which VLAN that specific MAC address is part of and will then assign the appropriate VLAN to the host.

While static configurations are the better option for VLAN security, remember that they nevertheless remain inadequate for providing absolute security. They do provide a safeguard against offhand attempts at viewing your network traffic, but VLANs have their own security shortcomings, such as VLAN "hopping." In hopping, network security is jeopardized when a packet sent from a VLAN is intercepted or rerouted to another VLAN.

Experienced hackers can exploit these vulnerabilities to sniff data and determine passwords and other critical data at the Layer 2 switch level where VLANs operate. Because switches weren't originally devised to perform as firewalls or routers, they're inherently vulnerable to such attacks. Fortunately, the new breed of smart switches currently available is helping to put an end to this deficiency and reinforces the value of VLANs as a wireless security strategy. **56408**

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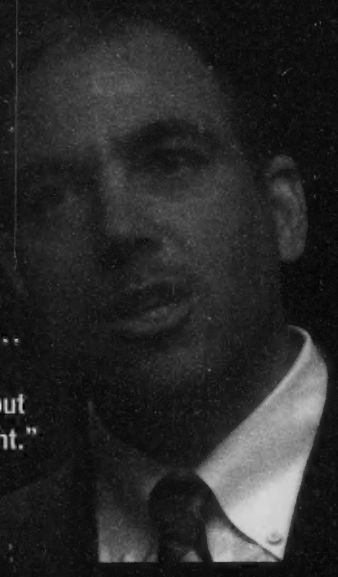

"Computerworld's approach of using real-world testimonies is really the key. If I wanted a vendor opinion, I'd call a vendor up . . . so when I see my peer talking about security challenges and when I see my peer talking about technology innovation, it has much more weight."

Steve Bandrowczak, VP CIO, DHL Express

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PREMIER 100 SPOTLIGHT
No Strings Attached
Rent-A-Center's flexible, wireless hiring kiosks have saved time and money, improved hiring and inspired further automation, says CTO Tony Fuller. **Page 36**

WHO'S WHO IN IT
Fishing in the Data Pool
Systems and programming manager Shawn Mahoney tells what it takes to help his business customers reel in the right information. **Page 37**

BOOK REVIEWS
The World Is Flat
Thomas Hoffman looks at Pulitzer Prize-winning columnist Thomas Friedman's latest effort, as well as books on how to get the most out of your team and how to handle tough questions. **Page 40**

LOCKING DOWN IM

Before you embrace instant messaging, be sure to address the risks. By David Greer

INSTANT MESSAGING has fought the battle for business turf and won. The use of IM in the corporate sector has reached mainstream status, and it's a welcome productivity boost.

"Before IM, we had too many salespeople who had to get up and go meet face to face because someone couldn't be reached. And with e-mail, you have a latency issue, so employees would get up and go talk to each other," says Josh Stallings, vice president of strategic initiatives at No Red Tape Mortgage in Sherman Oaks, Calif.

"Now our people are on the phone all day because they can [simultaneously] IM our processing team to get the information they need for our clients," he says.

IM is a real-time text communications technology with which messages can be sent, received and viewed immediately. And it's nearly everywhere, says Paul Ritter, re-

ISABELLE ARSENAULT

search director for messaging and collaboration at Wainhouse Research, a communications market research firm in Duxbury, Mass. "Our research shows that more than 80% of large companies in the U.S. have some form of IM," he says.

But IM is risky and could cause as much damage as rogue e-mail, says S.V. Purushothaman, program leader of the conferencing and collaboration group at Frost & Sullivan Ltd., a high-tech consultancy in New York. "Today, 10% of global IM messages are spim," or IM spam, says Purushothaman. "It has the same potential as e-mail spam."

Moreover, hackers are finding it easier to break in through IM buddy lists than by other means, he says.

While some companies have outlawed IM because of security concerns [QuickLink 56025], many are looking for ways to mitigate risks while enjoying the business benefits. Here are steps you can take to secure IM in your organization.

MANAGE UNAUTHORIZED IM CLIENTS. This applies to anything that's added to IT assets and infrastructure, says David MacLeod, director of information protection and assurance at The Regence Group, a health insurance carrier in Portland, Ore. "We have a very well-defined, -controlled and -monitored electronic perimeter," he says. "We know what can leave our organization and what can come in. That is clearly the first and most important step when you want to introduce anything new onto the network."

ADDRESS RISKS THAT ARISE FROM CHANGE. Simply adding IM to the network, like adding any software, introduces risk. "It's not because it happens to be IM. Anytime we add something new to our environment, there are security and privacy considerations," says MacLeod. "You need to determine whether it has altered the security posture of the organization."

IDENTIFY AND VERIFY USERS TO CURTAIL UNAUTHORIZED ACCESS. This is what's referred to as authenticating the user. CIO Tim Hudson at Man Financial, the brokerage arm of London-based Man Group PLC, accomplishes this by tying the party's identity and permissions for various types of uses to existing technologies that identify people who have access rights on the network. "If someone has logged onto IM, we know that she or he is that person," says Hudson.

ESTABLISH APPROPRIATE-USE POLICIES. "If you have an IM product you want to use, you need to do due diligence and have proper policies in place," says Frost & Sullivan's Purushothaman. Policies may include rules such as not allowing users to send files via IM, because sending and receiving attachments makes it easy to spread viruses, he says.

Or you may not want different workgroups to IM one another. "We have separate user groups and don't necessarily allow them to IM each other. This ensures that research, sales, and institutional and product client groups are appropriately connected or disconnected," says Hudson. The same technologies that identify users can identify the workgroups they belong to with their individual IM privileges, he says.

EDUCATE EMPLOYEES ABOUT IM USE AND POLICIES. Employees play an important role in IM security. "Educate your users that they shouldn't be sharing passwords and that if they are, they're handing over their identity to their colleague," says Hudson.

At The Regence Group, people management is key to securing IM. "We have clearly articulated our policies around what kinds of information should be shared, what kinds should be protected and what are appropriate mechanisms for sharing information," says MacLeod.

ENFORCE POLICIES. "We have tools that automatically apprise us when it appears that something against policy has occurred,"says MacLeod. "We work with human resources and our leadership team to make sure that the employees involved understand why that's not appropriate and to coach them on how to do that kind of information exchange in a more secure and appropriate manner."

Purushothaman takes a harder line against IM misuse. He suggests issuing one or two warnings and then probation for offending employees.

MONITOR RISKS RELATED TO SECURITY AND PRIVACY LEGISLATION. Many companies using IM are subject to multiple privacy and security regulations, such as the Health Insurance Portability and Accountability Act and the Sarbanes-Oxley Act.

The compliance concern is that information that should be secured can be passed on quickly and easily to numerous parties in the public domain, CIOs say.

Therefore, in industries such as financial services, pharmaceuticals and health care, IM conversations must be archived and logged. There also need to be policies to prevent any damaging information from getting out, says Purushothaman.

MANAGE IM PATCHES. Take the same care with IM patches that you do with any other software. "We evaluate all IM patches to determine if they address something that is at risk for our organization, and if they do, they are prioritized and applied as quickly as appropriate," says MacLeod.

IF YOU SEND INSTANT MESSAGES OUTSIDE THE COMPANY, RECOGNIZE THE UNIQUE RISKS ASSOCIATED WITH THAT. "If a CIO believes she or he needs to IM outside the company, that introduces an entirely different set of concerns," MacLeod says. "You require a different set of controls, and it should be segregated from the internal messaging capabilities."

Additional authentication measures might be necessary to adequately identify who is sending instant messages from outside the company, Hudson adds. **56144**

Geer is a freelance writer in Ashtabula, Ohio. Contact him at geercom@alltel.net.

OUTSIDE THE WALL

MANAGED PUBLIC INSTANT MESSAGING, which uses gateways to and from public systems, lets companies communicate beyond their walls to a vast world of customers, partners and contacts using whatever IM software they want.

The benefits of being able to reach everyone instantly are pushing companies to find secure managed public IM products and driving vendors to provide them, says S.V. Purushothaman, program leader of the conferencing and collaboration group at Frost & Sullivan.

IM vendors such as Microsoft Corp. and IBM, which sell server software to companies that want to run their own IM systems, are striking deals with public networks like American Online Inc.'s IM network, says Paul Ritter, research director for messaging and collaboration at Wainhouse Research. At the same time, managed public IM vendors, including IMLogic Inc., FaceTime Communications Inc. and Akonix Systems Inc., are selling gateways designed to securely regulate traffic between public and internal IM networks, Purushothaman says.

The managed public IM vendors are also developing environments called federated clearinghouses that enable users with public IM user IDs to send and receive instant messages securely, he adds.

These clearinghouses mitigate the risks of intercompany IM because they don't include the millions of users on public IM, Purushothaman explains. "You might have access by invitation," he says. "If you are a preferred partner, for example, a company could choose to provide you access to its internal IM network. The access won't be provided to the entire workforce of the partner. It could be limited to 10 to 20 users."

At No Red Tape Mortgage, business-class IM is provided on a secure, external network, says Josh Stallings, vice president of strategic initiatives.

The company selected an external IM service to segregate IM from the company network. "We chose this model to remove IM from a position of access to other applications on our network," says Stallings. This isolates IM from the company's internal applications and network for security reasons. It also keeps IM from using up the bandwidth reserved for those other applications, Stallings says.

– David Geer

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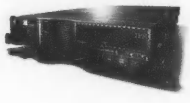

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100 PREMIER

[SPOTLIGHT]

No Strings Attached

Rent-A-Center's wireless hiring kiosks are a model of efficient in-store automation and a catalyst for more. By Gary H. Anthes

IF A SINGLE WORD could sum up the system development approach at Rent-A-Center Inc., it would have to be *flexibility*. Flexibility in project management. Flexibility in technical architecture. Flexibility in application design.

Those three ingredients came together recently when the $2.3 billion, Plano, Texas-based chain of merchandise rental stores overhauled its human resources system and put wireless hiring kiosks and thin clients into nearly 3,000 sites across the U.S., Canada and Puerto Rico.

The system, which processes 10,000 applications and 1,000 new hires a month, cost $3.9 million and is saving Rent-A-Center $2.3 million a year, the company says. It also has freed store managers from hours of paperwork each week, boosted the quality of new hires while decreasing employee turnover and laid the foundation for further in-store automation. "This has been a huge success for the company," says Tony Fuller, IT vice president and chief technology officer and a 2005 *Computerworld* Premier 100 IT Leader.

"This has been a huge success" for Rent-A-Center, says CTO TONY FULLER.

Before 2004, a job applicant walking into a Rent-A-Center store had to fill out a paper application, and the store manager would hold it until he had an opening. Neither the home-office HR department nor a nearby store with an immediate opening would know anything about the candidate. Moreover, the store manager was forced to become a part-time HR specialist, something he may have had neither the time nor the temperament for.

Now, that same applicant sits down at an in-store kiosk, reads about Rent-A-Center on the company's Web site and then fills out a job application online.

The completed application is transmitted wirelessly to the store's network and from there to corporate HR via the company's virtual private network. The application is processed and screened by recruiting specialists using the Webhire Recruiter hosted service from Webhire Inc. in Lexington, Mass.

When a store manager notifies the home office of an opening, within 24 to 48 hours he'll get the résumés of at least five prequalified applicants to choose from, according to Jennifer Wisdom, HR vice president. "A senior VP estimated for me that his [regional] market managers were spending 20% to 25% of their time in recruiting," she says, "and now it's about 5%."

Tammy Walker, who manages a Rent-A-Center store in Orange City, Fla., agrees. "We are getting better people now, and it has reduced our turnover," she says.

Walker says every applicant, qualified or not, used to cost her two hours of paperwork. Now the paper is gone and most of that labor takes place in the corporate HR department.

Rent-A-Center stores change their merchandise and floor layouts continually, says K.C. Condit, director of technical infrastructure, and that's one reason the company insisted on wireless kiosks. The little cubicles — which are fitted with a diskless, book-size thin client, a display, a mouse, a keyboard and a chair — can be moved easily, and the company saves the cost of wiring and rewiring 3,000 stores.

"This was a lead-in to more things down the road," Fuller says of the project. "The kiosks were the catalyst that allowed us to do the infrastructure, and we have piggybacked a lot of things onto that."

With the network infrastructure in place and the thin-client and wireless technologies proven, Rent-A-Center ordered 9,000 more wireless-enabled thin clients to support additional in-store applications. Account management, which had been a laborious, paper-based function, has been automated, and a training program based on books and videotapes was turned into a Web-based program managed by the home office. Store personnel can use the thin clients for e-mail and access to the company intranet as well.

And each store can serve as a "virtual office" for regional mangers, who are on the road visiting stores four days a week, Fuller says. "Now that we have proved that wireless works in the stores, we can deploy things on demand fairly quickly," he says.

Adds Condit, "We program the device, ship it to the store, and all they have to do is plug it in and turn it on — from out of the box to on the network in 10 minutes, without having to call tech support." **56146**

READY, SET, GO!

"One of the biggest challenges — aside from 'Here's technology we have never used and let's make it work' — was we did the entire project in five months," says K.C. Condit, director of technical infrastructure at Rent-A-Center.

When you work that fast, you learn things that not every IT manager knows. For example, it's not easy to buy 3,000 chairs all at the same time. But that's what the company had to do to deploy its kiosk-based employment application system within that condensed time frame.

"We pushed some vendors to the limit, to put it mildly," recalls CTO Tony Fuller.

Indeed, a gaggle of furniture, computer hardware and software vendors had to run to keep up with a project schedule shaped by a company with a flat organizational chart and an informal management style.

"We take pride in having a very small management staff in our home office, and we have very open lines of communications," Fuller says. "From when we decide to do something to implementation has always been a short time. We like to get in and get it done."

Fuller explains that for a project of this magnitude, which includes multiple departments such as IT, HR, purchasing and real estate, "we have the ability to get all the right people into the room all talking the same language. And we get the vendors into the loop from Day One also."

– *Gary H. Anthes*

Fishing IN THE Data Pool

WHO'S WHO IN IT

Shawn Mahoney guides business customers to the right information and helps them reel it in.

SHAWN MAHONEY

Title: **Systems and programming manager**

Employer: **Foremost Insurance Co., part of the Farmers Insurance Group in Caledonia, Mich.**

Years in IT: **10**

Years in current specialty: **Four**

What's the most important contribution you make, and how do you make it? We have two responsibilities here, data warehousing and back-end reporting — business and management reporting. We manage and define data for reporting. That's incredibly important to the organization. We work very diligently to provide meaningful reporting for the business. That includes regulatory reporting. We support finance, claims and certain areas of product, actuary and underwriting. Most of the business looks to us for special reports.

What is the most important IT skill or aptitude you need to do your job? If you want to be successful in IT, you can't be just a specialist anymore. You have to have a blend of skills to be effective. You need a little programming background, but as a manager, I can't be just the fastest coder; I try not to code. But I need to understand the effort it takes to get useful information out of the box. I also need a strong familiarity with the data and why and how the business uses the data and how it's defined.

What is the most important "soft" skill you need to do your job? I have 10 direct reports, and I have to have really good people skills to harness their energies, get them focused on a particular agenda, lead them through tough times and get quality information out the door. If I were not a people-oriented person, I don't think I could be very successful. Communication plays an important role here. We spend an awful lot of time bridging the communications gap between business people, who have their own acronyms and language, and the hard-core applications-development side of the business, which is a different area. When the business has needs, we listen intently and restate them in tech terms for the tech counterparts. Everyone has to be in tune so that transfer can take place.

What's the biggest misconception about what you do? I think the time it takes to do things is the biggest misconception. Business people understand that what we do is difficult, but they say, "It's sort of like this other job." They don't realize that once you get down under it, the required changes take more time than they thought. We want to turn things around quickly, but there's a level of due diligence. We want to be sure we've understood correctly. Everybody's grappling to shrink the time to develop a report, but the level and complexity of reporting in today's environment has only gotten more complicated.

What do you like best about your job? I have a great team. If I didn't, it would be very frustrating. And I have very supportive management. I've been allowed to take this role and develop it and work with a diverse group and make it all work. It's fun. If I couldn't get up in the morning and know I'm going to have fun, I wouldn't want to be here.

What do you like least? The volume of regulatory work we have to comply with. It just seems to grow. This is a highly regulated industry, and some of it gets to be so — you just wonder why they're asking the question. I don't mind doing this, but I would like to know why, other than that the state decided to report this way.

What should other IT people know about your role? That it's fun to be a manager. You don't always see a lot of people striving to take on management roles in IT, but it can be fun to be a manager, as long as you find ways to cut that work umbilical cord at the end of the day. There's a sense of satisfaction that you get. Even when things go wrong, when you come up with a solution, you derive a lot of satisfaction from that. It's a challenge, and it's rewarding.

What should business people know about your role? That for this to be a successful partnership, they need to invest a lot of quality time and not just turn something over to IT. It takes commitment from both parties to be successful. You need a business partner [who's] not only willing to help you build a requirements document but also to take the time to educate the team as to why they need this done so everybody buys into the game. There's a better result when everybody understands. We lose that if we're just programming out of a set of specs and have no clue why they want information in that format. We need the business people to be here throughout the whole process. More and more, we see people willing to do that, but there are still a few we need to convert.

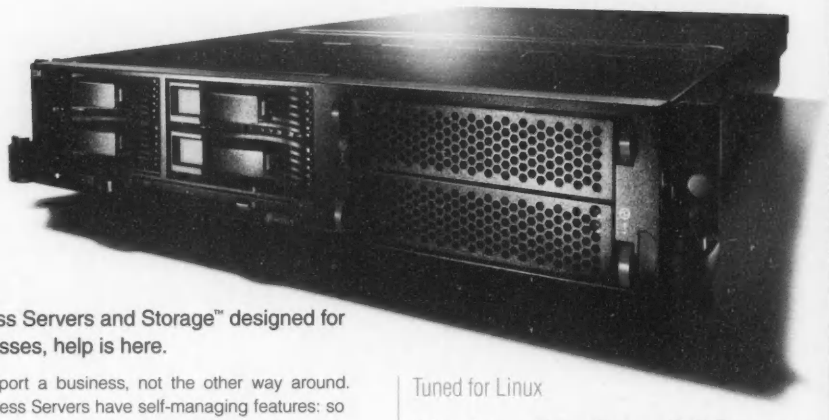
What would enable you to do your job better? More resources are always nice. Bigger, faster, more people is certainly important. All of IT has gone through a real austerity program in the last few years. As businesses look at what they need to do to be competent in this increasingly global marketplace, they have to think where to put their investments. Organizations have a lot of information, and you can do a lot to the data that makes it easy to ask questions and learn something about the business. That takes time, talent and investment, but it pays dividends.

If you weren't a systems and programming manager, what would you be? My dream job would be fishing guide, but it probably doesn't pay very well. Helping people get at something by putting them in touch with the right resources and the right body of water — catching fish and catching data aren't all that different.

How does the future look for your role? I'm pretty positive and excited about it. Because through back-end reporting and data warehousing, we're really tied to the business from an information perspective. It's the information side of information technology that's important. Technology is going to change, and that's exciting, but you really need to remember the core is having knowledge about the data and keeping it where you can get at it and use it. **56148**

Interview by Kathleen Melymuka.

HOW MANY PEOPLE DOES TO SUPPORT A SINGLE (THAT'S TOO MANY.)



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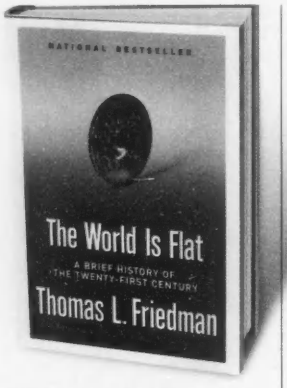
THE World IS FLAT



The World Is Flat: A Brief History of the Twenty-first Century, Thomas L. Friedman *(Farrar, Straus & Giroux, 488 pages, $27.50).*

MUCH HAS BEEN written and said about the latest book from the Pulitzer Prize-winner and *New York Times* foreign affairs columnist Thomas Friedman. Clayton Jones of *The Christian Science Monitor* called it "an idiot's guide to surviving in the computer age," while Warren Bass described it as "an enthralling read" in his review for *The Washington Post*. I'd say the book falls somewhere in between. To Friedman's credit, it's the most comprehensive description I've seen of how the events of the late 20th century and the first few years of the new millennium have helped "flatten" our world.

Friedman's premise is simple: The massive investment made in fiber-optic technologies during the heyday of the dot-com era has made it possible for companies from Shenzen, China, to Sofia, Bulgaria, to compete in what has truly become a global economy, thus leading to a "flatter" world.

He supports this thesis by listing 10 forces that have helped flatten the world, including the collapse of the Berlin Wall, India's shift away from an insular economy, the spread of PCs and Windows software, and the open-source software movement.

Some of what Friedman details is old news: how U.S. hospitals can transmit CT scans via the Internet and have them read by Indian or Australian radiologists overnight, and how sprawling call centers in India operate around the clock to support customers of big companies such as Delta Air Lines Inc. and Microsoft Corp.

Friedman argues that the world is now entering what he refers to as "Globalization 3.0." Globalization 1.0 occurred from 1492 to 1800, after Columbus' discovery of the New World helped reveal that the world could be circumnavigated, thus unleashing the potential for global trade. Globalization 2.0 occurred from 1800 to roughly 2000, when multinational companies ventured overseas for new sources of labor and trade. That era was driven by the Industrial Revolution and resulting technological breakthroughs such as steamships, trains, automobiles, airplanes and telephones.

Now we're in a third phase of globalization, says Friedman, when software and fiber-optic technologies have made it possible for people to conduct business around the world. And while the first two eras of globalization were led by Westerners, this latest period is open "to every color of the human rainbow," writes Friedman.

But the flattening of the world isn't just about offshore outsourcing, Friedman notes. For instance, he points to a McDonald's restaurant in Cape Girardeau, Mo., whose drive-through order-taker is located 900 miles away in a Colorado Springs call center. The order-taker is connected to the customers and the workers preparing the food via high-speed communications lines. The approach has helped the franchisee lower its costs, speed customers through and make fewer mistakes in handling orders.

At times, Friedman comes off as a cheerleader for the flattened world. Nevertheless, the book is compelling.

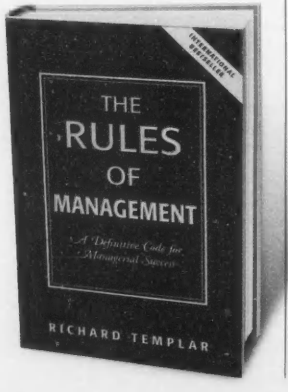
BOOK REVIEWS

The Rules of Management: A Definitive Code for Managerial Success, Richard Templar *(Prentice Hall, 209 pages, $16.95).*

NOT EVERYONE enters the workforce hoping to one day become a manager. But if you're a creative application developer, an effective project leader or a skilled network technician, you're likely to find yourself in that role at some point. Suddenly, you're thrust into the position of coaxing the most you can out of other people, acting as a buffer between senior management and your staff, setting a good example and making sure the job gets done right.

Unfortunately, you're unlikely to receive much guidance from your boss or a human resources manager on how to lead a team of people you didn't pick.

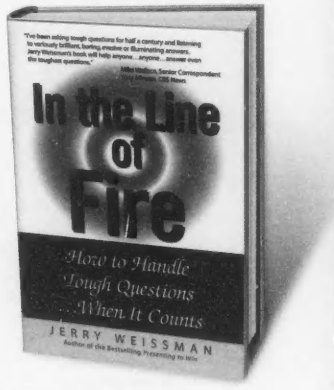
The book's title is an apt description of its contents: It's a list of 100 rules (for example, "Don't bad-mouth your boss," "Fight for your team"), each followed by a page or two of explanation about how to carry out that rule. Although it's tough to provide much depth on how to inspire loyalty from your troops in just two pages, this step-by-step template is a useful guide for new managers and a handy reference for seasoned bosses as well.



In the Line of Fire: How to Handle Tough Questions . . . When It Counts, Jerry Weissman *(Prentice Hall, 185 pages, $24.95).*

ON THE SURFACE, this may not seem like the typical IT management book. But as IT executives' roles have evolved, many have been thrust into public speaking, frequently needing to make presentations to intimidating boards of directors or hundreds of attendees at industry conferences.

While a good presentation can leave your audience nodding in agreement, an imminent threat lurks beyond the final PowerPoint slide: the Q&A session. This book, written by an acclaimed presentations coach who has worked with executives at hundreds of companies, including Yahoo Inc., Intel Corp. and Cisco Systems Inc., is aimed at helping speakers handle tough questions with aplomb.



A quick read at 185 pages, *In the Line of Fire* is nonetheless packed with practical advice and real-world examples. For instance, it dissects the mistakes incumbent George H.W. Bush made when he bungled a question on the national debt during a "town hall" presidential debate with Bill Clinton.

The premise of the book is that success centers on taking control of questions by various means, such as paraphrasing them to your advantage and managing the answer with confidence. Weissman's advice is useful for anyone who has had to field a tough question from a huge audience, a small group of staffers or a hostile executive. **56096**

Reviewed by Thomas Hoffman.

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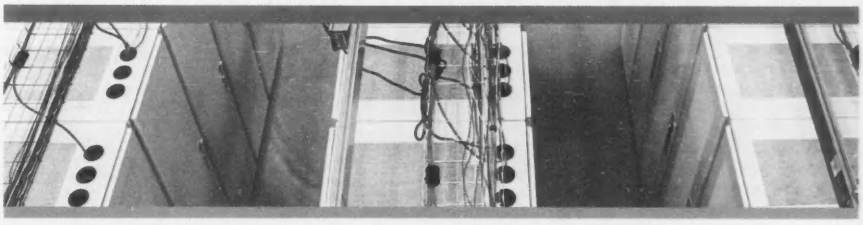

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EXEC TRACK

Playboy Appoints Senior VP, CIO

Playboy Enterprises Inc. in Chicago announced the appointment of MARK LAUDENSLAGER as senior vice president and CIO. Laudenslager comes from Walt Disney Internet Group, where he was vice president of technical operations. Previously, he was vice president of operations at ServerVault Corp. and head of e-business infrastructure at Capital One Financial Corp.

Allconnect Picks Singer as CIO

Allconnect Inc., a provider of home relocation services in Atlanta, has chosen NEIL J. SINGER as executive vice president and CIO. Singer comes to Allconnect from LandAmerica Financial Group Inc., where he was senior vice president of e-strategy and president of the company's mortgage processing venture. Previously, he was chief technology officer at HomeBytes.com Inc. and CIO at GE Capital Consumer Financial Services.

Private Healthcare Taps Jackson

Private Healthcare Systems in Waltham, Mass., announced the promotion of FRANK JACKSON to CIO. Jackson joined PHCS in March as vice president of applications delivery. Before that, he was CTO at Blue Cross and Blue Shield of North Carolina and CIO at Kaiser Permanente of North Carolina.

Northrop Names Lofton Sector CIO

Northrop Grumman Corp. has named ART LOFTON vice president and CIO of the company's Integrated Systems sector in El Segundo, Calif. Lofton most recently served as deputy manager of the long-range strike program for Integrated Systems.

JOHN COLUMBUS

Good Numbers And Bad

FOR THE PAST 22 YEARS, I've worked with computers. The basic concept of electronic computers is binary numbers: a 1 and a 0, the presence of something like voltage or its absence. The advantage of computers and math is the same. Both are either right or wrong. In my first full year as a computer programmer, this was vividly proved to me.

JOHN COLUMBUS is the owner of Columbus Consulting Group in New Hope, Minn. Contact him at datanyek@hotmail.com.

The Lotus 1-2-3 spreadsheet application had just come out, and my insurance branch employer had me use it to create our insurance agencies' profit/loss statements. They gave me the raw information and the previous paper-based calculation. I realized that this calculation wasn't mathematically correct, and I informed the top boss. He assured me that it was right but admitted there was a longer, more accurate calculation. I did a proof that showed that the two calculations weren't related to each other. Still, he still ordered me to use the quicker calculation, which I did.

My bosses evaluated the results and severed one agency's contract. Then I redid the report using the more accurate calculation. It was now very obvious that the simple calculation unfairly weighted sales growth at the expense of profit. They had kept the company that had increased sales but was unprofitable and fired the company that had steady but profitable sales.

I have seen executives look at numbers they don't understand and simply accept them as valid because some expert said they were. I have heard of people using bad calculations to measure performance and driving their companies into the ground.

The sad part is that the right calculations don't take very much time to discover. Here are two truths that will help you get quality numbers.

A valid measurement starts with properly describing reality. People get confused when trying to determine how to describe customer desires, employee happiness or production defects. Don't let the complex jargon of quality programs throw you off; basic math is all you need for any measurement, as long as it's sound math.

But before you calculate, realize that when you manage to a number, it's a means of leading people to a goal. Determine what you want to change and state the goal you're trying to reach in simple terms so you can see if the numbers lead to that goal.

Then remember the goal. If you're trying to improve customer satisfaction, for example, you can use surveys that determine the product features and services that make your customers happy. Remember, though, that a survey that measures complaints doesn't measure customer happiness; it measures complaints.

A common bad measurement is ratios in which the two numbers have no bearing on each other. The top number (numerator) must accurately describe part of the lower number (denominator). If there is no relationship, the numbers make no sense.

For example, management wants to know if help desk calls increase because of company growth or process problems. Help desk calls are a subset of employee access to computers. The more systems an employee accesses, or the more employees who have access, the higher number of calls because of the greater chance of defects.

But I've seen management try to equate help desk growth with growth in the number of servers. Server count has no direct bearing on help desk tickets. If I consolidate five servers into one, does that mean my help desk tickets will automatically decrease? Of course not.

The easiest measurement may not be the best measurement. Remember my earlier example about the easy calculation? It was simple for people to do, so they preferred it. But it led away from increasing profits.

Another favorite of mine is computer uptime. It's easy to calculate and usually looks good. My machine is down an average of only five minutes a month. Wow, it's up 99.988% of the time. But out of the 168 hours in a week that the machine is running, I may want to use it for only 50 hours. The fact that it was running for the other 118 hours is meaningless to me.

Employees are led by the numbers you manage to. If the scores don't measure progress toward real goals, they'll drive your company right off a cliff. If you don't know whether a number is good, challenge it. If you know it's bad, fix it.

Don't settle for easy to calculate. Being out of business is easy to calculate. It's zero. 56097

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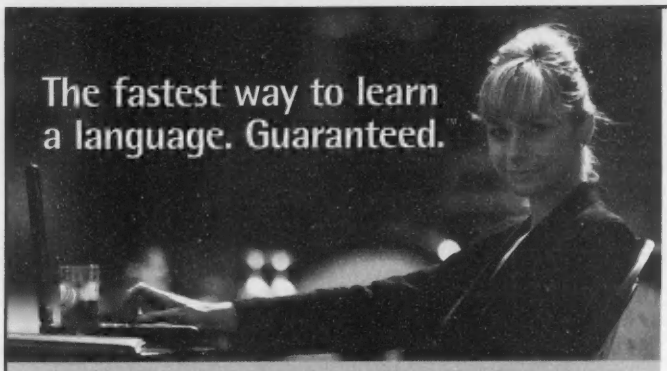

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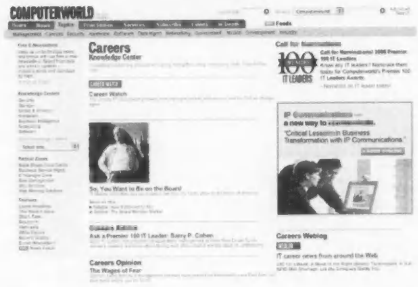

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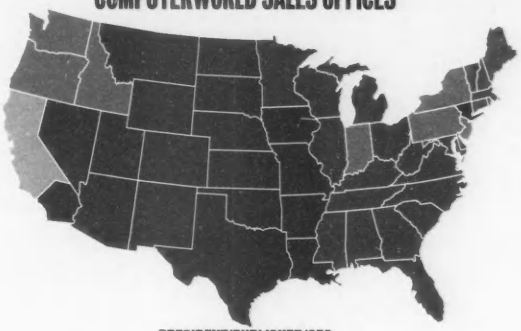

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Basel

or not at all improve the capital positions of banks.

The measure requires that by 2007 all European banks and the largest banks in the U.S. tighten integration of back-office systems and use more-sophisticated risk management tools to lower the amount of capital that must be set aside to cover operational and credit risks. Other U.S. banks are opting into the accord voluntarily.

Adam Stone, a security management analyst who asked that his financial services company not be named, said banking leaders are painting a rosy picture about the cost of Basel II in the belief that implementation will reduce risk.

"Organizations are just now figuring out how expensive this thing is and are starting to cry about it," he said.

Stone said he believes that over the next decade, regulators will force Basel II to trickle down to all large U.S. banks and then to insurance companies.

> **"The thing that makes it difficult is that actual Basel requirements are not finalized.**
>
> **ANNELIE SCHNAAR-CAMPBELL,** GROUP RISK MANAGEMENT DIRECTOR, STANDARD BANK GROUP LTD.

"I believe that it will be a natural evolution," Stone said. "First large banks, then medium and small banks, and then credit unions. Insurance regulators are already taking notice of Basel."

The Bank for International Settlements, a Basel, Switzerland-based organization intended to foster international monetary and financial cooperation, is overseeing development and implementation of the Basel II standards.

From an IT standpoint, the proposal calls for banks to take steps such as developing rules-based risk management engines and knitting together customer databases across entire enterprises. But compliance work has been more difficult than expected and progress is slower than anticipated, according to users and research firms.

"The thing that makes it difficult is where actual Basel requirements are not finalized. You have to make assumptions, for example with the risk calculator," said Annelie Schnaar-Campbell, director of group risk management at Standard Bank Group Ltd. in Johannesburg, South Africa.

The bank is three years into its Basel II implementation and is in the process of making enhancements to its credit-writing systems, collateral management systems, exposure and debt-limit management systems, and loss data systems. It is also implementing a new capital calculation tool, Schnaar-Campbell said.

According to the Accenture survey, executives at nearly half of 66 banks interviewed said they each expect to spend in excess of $61 million through 2007 on Basel II compliance, up from 23% of executives in Accenture's 2004 Basel II survey.

TowerGroup in Needham, Mass., estimates that the U.S. financial industry will spend $12 billion by next year complying with the Basel II requirements.

"We figured between 50% and 70% of the costs are IT-related. I think people also underestimated the business process and organizational impact," said Andrew Wilson, a partner for risk and regulatory management at Accenture.

Wilson said IT organizations will be affected by the amount of data that has to be collected to create accurate data models to compute the operational risk. They will also need to set aside capital to cover that risk.

IT managers can expect their environments to be affected on several levels. For example, they will have to store and maintain more data for longer periods of time, standardize data-collection systems, and roll out more-advanced analytical and reporting tools and predictive analysis tools, said Wilson. **56461**

Problems With Basel II

An Accenture survey of large banks found the following:

- Basel II compliance is more difficult than expected.
- Progress toward compliance is slower than anticipated.
- Bankers expect to spend significantly more funds on Basel II compliance compared with last year's estimates.
- Nearly half of the surveyed banks plan additional spending to realize more benefits than mere compliance.
- Seventy-nine percent of respondents said they expect Basel II to improve their capital positions slightly or not at all.

SOURCE: ACCENTURE LTD.

Continued from page 1

Microsoft

tion Server, which is needed for enterprise team development. The release will include a so-called Go Live license, which will allow companies to begin using the tool set to build and deploy applications, according to a statement from Soma Somasegar, vice president of Microsoft's developer division. The Go Live license doesn't include support and patch updates from Microsoft, according to the company's Web site.

Somasegar did say that all data within the third beta version of the foundation server will migrate seamlessly to the final version of the server.

Aaron Zupancic, a Salt Lake City-based senior software architect at Experlogix Inc., said the delay could prompt his company to push back the use of VS Team System by its internal developers. Experlogix plans to replace the Vault source-control software from SourceGear LLC with Team System to help its dispersed teams collaborate, he said.

Zupancic, also president of the Utah .Net User Group, said Team System's integration with Microsoft's SharePoint portal software will help the development teams too. "When creating a new project, you can immediately tie it to a SharePoint portal site and have team members share comments and documents," he said.

Anticipated Interest

Brian Randell, a senior consultant at MCW Technologies Inc., a consulting firm in Los Angeles, said that because Microsoft will be issuing Go Live licenses in November, many of his clients can now begin pilot projects with Team System.

Most, he said, are "chomping at the bit" to upgrade from Microsoft's Visual SourceSafe source-control tools to VS Team System because of its advanced reporting capabilities and metrics features.

Melinda-Carol Ballou, an analyst at market research firm IDC, said vendors such as Microsoft are targeting corporate users' emerging need to better manage extended development teams while adhering to increasingly rigid regulatory and compliance policies.

Some users, meanwhile, are ramping up other tools to better manage development teams. TextWise LLC, a builder of text-processing tools in Rochester, N.Y., began using an enterprise blogging tool in April from Traction Software Inc. to replace e-mail threads for collaboration.

The TeamPage blog software allows the company's development teams in Rochester, Baltimore, Boston and Syracuse, N.Y., to post design notes and status reports, said Rob Rubin, TextWise's chief technology officer.

To date, the company has had 1,200 blog postings, and this month it was able to avoid a 30-day setback to the development cycle because one group noticed a planned testing duplication on the blog, Rubin added.

Thomson Elite, which provides software to law firms, uses Borland Software Corp.'s StarTeam configuration management tools for its 200 developers in teams in Turkey, New Zealand and several U.S. locations.

Since it began using the system several years ago, the group has improved its productivity by about 35%, said Adina Kram, Thomson's release coordinator. **56458**

PRODUCT DETAILS

Visual Studio 2005 Team System

- Access to .Net Framework 2.0 and support for building tools that extend the Visual Studio integrated development environment.
- Virtual designers let architects, operations managers and developers design service-oriented applications that can be validated against operational environments.
- Advanced load testing to enable teams to verify performance of application before deployment.
- Team Foundation Server allows dispersed teams to manage and track the progress of projects.

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FRANK HAYES ■ FRANKLY SPEAKING

Network Effect

"I WORK FOR A HOSPITAL management company in the Midwest that works with 30 very small rural community hospitals. Not one of our hospitals is ready for electronic health records. They are not even close to giving up paper. I guarantee you there are more hospitals that do *not* have EHR than those that do."

This network manager who wrote to me is right. When I said a few weeks back [QuickLink 55837] that "hospitals have made the transition over the past decade" to EHR, I was wrong. True, many large health care organizations *have* put EHR in place. But the rest of the health care world has a big challenge ahead.

Wait, check that: A better way to say it is that because many doctors and small hospitals aren't using EHR, *everyone* in health care faces a big challenge.

Why? It's the network effect. Remember Metcalfe's Law: The more users who can communicate with one another on a network, the more valuable the network is.

Sure, EHR can save some money internally for each organization that implements it. But the big value comes when lots of organizations can exchange medical records efficiently.

And the lack of widespread use of EHR actually *adds* cost for organizations that use it. Every time one of those small community hospitals sends a patient to a big health care organization with actual paperwork, that paper has to be converted to electronic records. Then the EHR has to be printed on paper again for the patient's file when he goes back home.

That means we can't treat EHR as a competitive advantage that we keep for ourselves. We have to spread it around as widely as possible. Otherwise we can't realize the biggest benefits — including the largest cost savings.

That's not unique to EHR. For example, no company can get maximum advantage alone from RFID; everyone on the supply chain has to use it. And Internet retailing only works when all customers and suppliers use the same Web protocols.

But that's not the way we're used to thinking about IT's benefits. And it's not the way we usually sell new IT initiatives to top management. It's one thing to say, "We need to adopt this technology to get an advantage over the rest of our industry." It's quite another to argue, "We need to get the rest of our industry to adopt this technology so we can maximize our benefit from it."

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

In the case of EHR, it's especially sticky: These are patients, not products, so there's no chance of a Wal-Mart-style "adopt this or we won't buy from you" ultimatum.

But big health care organizations still have a big interest in getting small hospitals, clinics and medical practices on board with EHR. It's the only way to get a big-time payback from their own EHR spending.

Making that happen won't be easy. The costs of software, hardware, implementation, training and running the systems aren't trivial. Distributing less-expensive EHR software like VistaOffice is a start, but more will need to be done.

For big health care players, will that mean contributing improvements to the VistaOffice software? Partnering with small hospitals to train IT and medical staff? Donating equipment? Lobbying for the health care equivalent of the Rural Electrification Act?

I don't know. But short of a real push, big health care organizations won't get the ROI they want from EHR. And as that network-manager reader put it, "those that do not have EHR will not be ready in the next few years — or the next 10 years."

Incidentally, in response to readers who asked where to find VistaOffice EHR and the open-source OpenVista, try the Vista-Office Web site (*www.vista-office.org*) and WorldVista (*www.worldvista.org*). OpenVista is available now; VistaOffice EHR is still scheduled to be out this month. **56431**

You Win Some, You Lose Some

For weeks after new servers are installed, this computer room can't stay cool. "The plant engineer installed a red warning light so we could see if the temperature exceeded 78 degrees, and it was always on," says a sysadmin pilot fish. "I pointed it out for weeks, expecting them to do something. Finally the light was out, and I thanked them for fixing the cooling problem. No problem, they answered, glad we finally got it fixed for you." But next day it's hotter than ever – and the red light is still off. "It wasn't fixed," sighs fish after investigating. "The light bulb had just burned out."

SHARK TANK

Don't Ask

Edict comes down from management: All workstations must be set to lock up after 15 minutes of inactivity. That's inconvenient for this pilot fish and his group, whose members often leave their desks for short periods. "One of my coworkers challenged our local IT admin to show him where in the corporate policy manual this rule was stated," says fish. Admin dutifully tracks it down and, sure enough, there's no 15-minute rule. Sighs fish, "The official rule was 10 minutes."

Can You Give Us A Hint?

User's plea to support pilot fish, in its entirety: "I deleted something from my desktop – I'm not sure what. I was trying to delete something and I deleted whatever this was instead. You can see the empty space between Microsoft Word and Microsoft Access. It must have been something I needed, or else it wouldn't have been there, but I'm at a loss for what it was. Is there any way you can get it back for me without knowing what it was? Thanks!"

Timing Is Everything

Help desk pilot fish needs data on a particular user's hard drive at a remote site, so he heads off to fetch the unit. Not very long afterward, the same user phones the help desk about a different problem and asks for fish by name. Sorry, he's not here, tech tells her. She hangs up, turns around – and there's fish, standing in her doorway. Surprised user: "Wow! You help desk people are *good*!"

What a Concept!

After user's hard drive is replaced, she remembers a file that wasn't transferred to the new disk – and it has information she needs. "She knew the old one went to a storage room full of drives," says a pilot fish on the scene. "But when she asked us to retrieve it, we did so in a few moments." Amazed user: How did you find my old drive so quickly in that hard-disk graveyard? Fish: "We put your name on it."

I WON'T PUT YOUR NAME ON IT. Send me your true tale of IT life at **sharky@computerworld.com**. You'll score a sharp Shark shirt if I use it. And check out the daily feed, browse the Sharkives and sign up for Shark Tank home delivery at **computerworld.com/sharky**.

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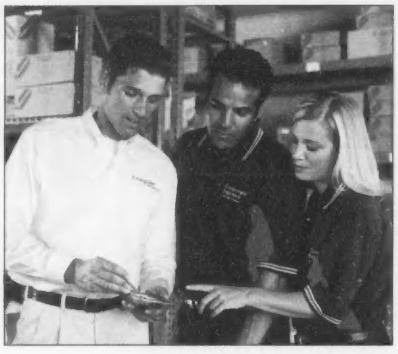

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raising the bar

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